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ABSTRACT

This report provides brief case studies of 22 public school buildings in 12 states, representing urban, suburban, and rural communities, including both district-run and charter public schools. The studies demonstrate the schools' ability to improve academic achievement and behavior in safe, nurturing, and stimulating environments. The researchers say the case study analysis reveals that on average, smaller schools can provide a safer and more challenging school environment that creates higher academic achievement and graduation rates, fewer disciplinary problems, and greater satisfaction from families, students, and teachers. Also, schools that share facilities with other organizations offer broader learning opportunities for students, provide higher quality services to students and their families, and present a way to efficiently use tax dollars. (GR)

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Smaller, Safer, Saner Successful Schools

National Clearinghouse for Educational Facilities
Center for School Change, Humphrey Institute of the University of Minnesota

EF 005 993

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SMALLER, SAFER, SANER,
Successful Schools

Joe Nathan and Karen Febey
Center for School Change

NATIONAL CLEARINGHOUSE FOR EDUCATIONAL FACILITIES, WASHINGTON, D.C.
CENTER FOR SCHOOL CHANGE, HUMPHREY INSTITUTE OF THE UNIVERSITY OF MINNESOTA, MINNEAPOLIS, MINNESOTA

2001

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Thanks to Migs Grove for careful editing and to Sue Showers for her help with the South Grand Prairie case study.

Marcia Axtmann Smith's design transports the report from written word to visual reality, bringing to life the wonders flourishing within these schools.

The conclusions are those of the authors and do not necessarily represent the opinions of the funders or the educators whose schools are described. The Humphrey Institute of the University of Minnesota welcomes diverse opinions and aspirations. The institute does not take positions on issues of public policy. The contents of this report are the responsibility of the authors.

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Table of Contents

Acknowledgements 2

Executive Summary 7

Summary of Research on Small Schools and Shared Facilities 8

School Case Studies 23

Academy Charter School 24

Academy of the Pacific Rim Charter School 25

Alpha High School 26

Arizona Agribusiness and Equine Center 29

Boston Arts Academy and Fenway High School 31

Buffalo King Center 32

Campus Magnet Schools 34

City Academy 36

Clark Montessori 38

Frederick Douglass Academy 40

El Puente Academy for Peace and Justice 42

Julia Richman Education Center 44

Mesa Arts Academy 46

Minnesota New Country School 48

Northfield Community Center 50

Nova Project 52

Parham School 54

Perspectives Charter School 56

School of Environmental Studies 58

South Grand Prairie High School 59

Vaughn Next Century Learning Center 60

Wyandotte High School 62

Resources 64

Photo Credits 64

About the Authors 64

Research Summary

Executive Summary

Families want safe, nurturing, challenging, and effective schools for their children. At a time when record sums are being spent on school buildings, it is vital to talk about how that money is being used. We can make significant progress toward what parents, legislators, and other concerned citizens want by using ideas from small schools and schools that share facilities. This is perhaps the first report to combine case studies from all over the United States with a research summary, showing how educators and community members have created these schools.

THE REPORT PROVIDES BRIEF CASE STUDIES of 22 public school buildings in 12 states: Arizona, California, Colorado, Illinois, Kansas, Massachusetts, Minnesota, New York, Ohio, Oregon, Texas, and Washington. They represent urban, suburban, and rural communities throughout the United States and include both district-run and charter public schools. These schools serve a vast array of youngsters. They are united in their ability to improve achievement and behavior in safe, nurturing, stimulating environments.

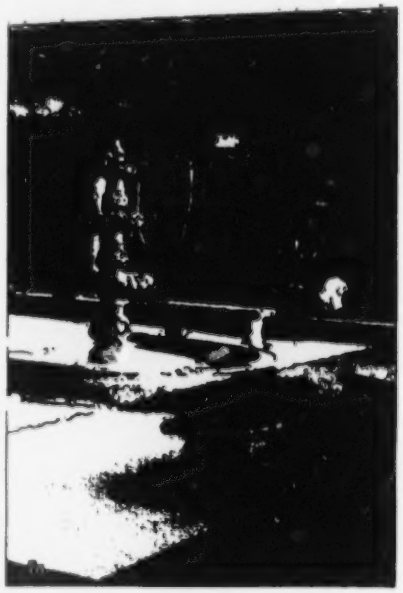
The key conclusions of this report are

1. SMALLER SCHOOLS, ON AVERAGE, CAN PROVIDE
   - a safer place for students
   - a more positive, challenging environment
   - higher achievement
   - higher graduation rates
   - fewer discipline problems
   - much greater satisfaction for families, students, and teachers.
2. SCHOOLS THAT SHARE FACILITIES WITH OTHER ORGANIZATIONS CAN OFFER
   - broader learning opportunities for students
   - high quality services to students and their families
   - higher student achievement and better graduation rates
   - a way to stretch and make more efficient use of tax dollars.

WE BELIEVE, AND WE HOPE, THAT THIS IS AN ENCOURAGING REPORT. These schools show how to provide much more effective education for students. And they help show how small schools and those that share facilities can be much more satisfying places for teachers. This is a critical issue as the nation considers how to attract and retain teachers.

THIS IS NOT A REPORT ABOUT EDUCATIONAL THEORY. It is a study about how real, existing schools can help the nation offer saner, safer, smarter, better public education.

The value of small schools has been 'confirmed with a clarity and a level of confidence rare in the annals of education research.' Photo illustration 6a: El Puente Academy, located in a former church, Brooklyn, New York. 7a: Arizona Agribusiness and Equine Science Center, Phoenix, Arizona. Both schools are featured in this report.



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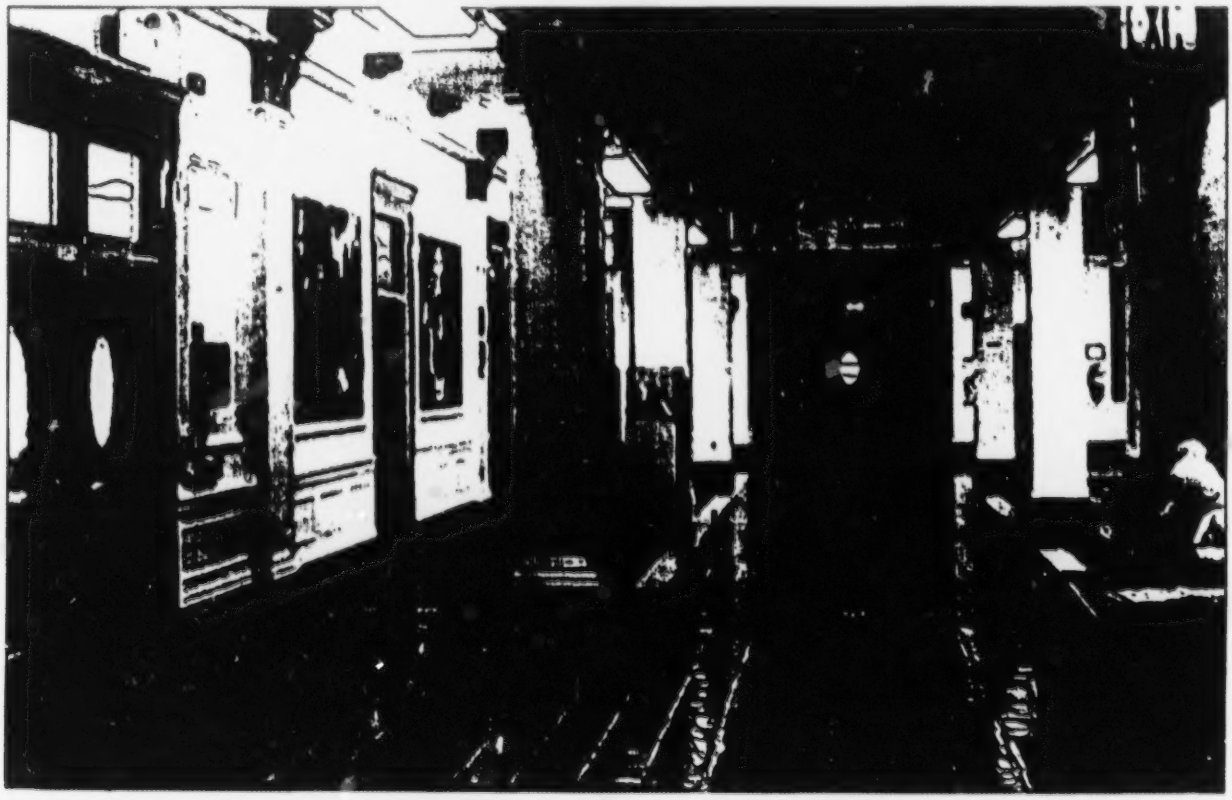
Summary of Research
ON SMALL SCHOOLS AND SHARED FACILITIES

School buildings are getting more attention and they should. A school's size and the groups with whom a school shares space can make an enormous difference. Whether located in an urban, suburban, or rural area, small schools are safer and, in general, students in small schools learn more. Moreover, school buildings that share space with other organizations can provide youngsters with a better education and use taxes more efficiently. These are some of the key lessons people throughout the United States are learning. This report shares their stories.

Given the enormous sums of money being spent on school construction, this is a critical time to discuss how the money will be spent and what type of buildings will be constructed. Spending on school buildings is increasing, accounting for billions of dollars. Latest industry estimates are that more than $21.5 billion was spent on elementary and secondary school construction in the year 2000, an increase of more than one-third over the previous year. That was more money than had ever been spent in a single year on K through 12 school buildings. Educational administrators are estimating that more than $84 billion will be spent on elementary or secondary school construction between 2001 and 2003. About half of that will be used for new schools; the other half, for modernization and additions to existing schools (Agron 2001).

Imagine a small, inner city public secondary school deeply interested in the best ideas of Asian and American education that starts every class with teachers and students bowing to each other, praising each other for their efforts. The school begins every day with a 20-minute assembly, during which students are rewarded for persistence. This public school produces students who have among the state's highest test scores, even though this inner city school is open to all.

Imagine a rural secondary school that begins the school year with an individual family-student-teacher conference, asks students to make public presentations every six weeks, and provides each student and faculty member with a computer and desk that they can personalize with pictures of family, friends, and favorite hobbies. The Bill and Melinda Gates Foundation just gave this school $4 million to replicate itself because of its great success.



Imagine a large suburban high school near Dallas that has converted to five small schools and has seen its already good graduation rate and other important indicators improve even more. Imagine rural or suburban fitness centers, built as part of a high school, paid for in part with foundation, corporate, and city funds. They are open 18 hours a day and provide facilities far more extensive than either the school districts or towns could afford by themselves.

Imagine an inner city elementary school that shares space with a local service agency so that agency staff can dramatically expand offerings to students and work directly with families. This school has gone from having the lowest achievement and worst attendance of any neighborhood K–8 school in Cincinnati to a school praised by the district and the U. S. Secretary of Education for having the city's greatest gains in achievement and attendance.

None of these schools is imaginary. They each exist. You will learn more about these and other remarkable schools in this report. Educators, parents, and community leaders in these rural, urban, and suburban communities are serious about making things better for young people and their families. They looked at the best available research and experience about small schools and shared facilities. Then they used it. They have much to teach us.

We have tried to combine research with reality. This report is designed for parents, educators, school board members, legislators, business, and community groups—for anyone who is considering the role a school building can play in the lives of young people and the development of a community. We want to show examples of communities that have used research on school size and shared facilities to create buildings—and schools—that work better for students.

Over the last five years, researchers have concluded that smaller schools provide many benefits—achievement, attendance, graduation rates, and behavior all tend to be better in small schools. This is true in urban, rural, and suburban areas.

The research we share questions the tendency over the last 20 years to build even larger schools. Along with research, tragedies like Columbine High School showed that there are problems, as well as strengths, when communities create huge schools.

Families and young people face many challenges today. Some communities have developed shared facilities, in which schools share space with businesses, social service agencies, or other organizations to help provide a more effective education for young people. By sharing space, educators, students, and citizens can gain access to a fuller, often better range of programs and services.

This report contains four major sections. The first offers a brief summary of the benefits small schools offer to students and educators. The next section discusses experiences with shared facilities. The third describes

The research we share questions the tendency over the last 20 years to build even larger schools.
8a: Julia Richman Education Center, New York City. 9a: Vaughn Next Century Learning Center, Los Angeles.

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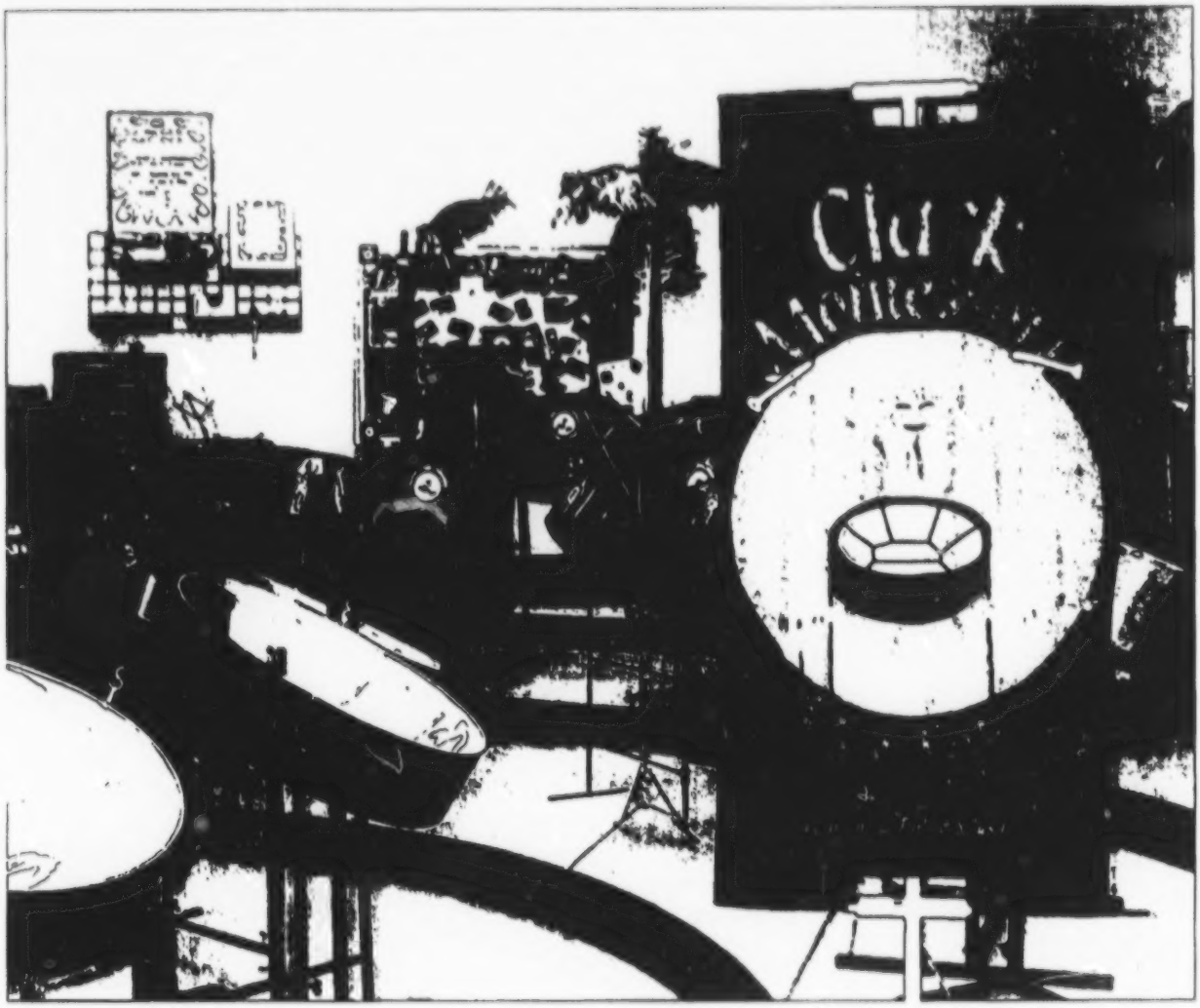

Smaller high schools are more engaging environments and produce greater gains in student achievement. 10a: C. ırk Montessori, Cincinnati, Ohio. 11a: Classroom art display at Mesa Arts Academy, Mesa, Arizona.

school facilities nationwide that appear to be making good use of this research. The final section lists resources that can provide additional information and assistance.

No one would describe the schools cited in this report as perfect. But many of them have excellent records of improving achievement, increasing attendance, and providing other important benefits to students and the broader community.

Former *New York Times* reporter Gene Maeroff recently wrote a hopeful book describing the dramatic positive impact partnerships among educators, business people, parents, and other community members are having on young people. To indicate the power of well-designed partnerships, the book was called *Altered Lives*. We hope that this report will help readers understand how, as Maeroff explains, "the altered lives of a relative few serve as testament for what is possible for the many" (Maeroff 1998: 305).

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Research on School Size

The positive effect of small schools has been known for years, but it was not until recently that studies found a strong relationship between higher academic achievement and lower enrollment (Eckman and Howley 1997). A recent research summary commissioned by the U. S. Department of Education was very clear on the subject. It notes that the value of small schools in increasing achievement, graduation rates, satisfaction, and in improving behavior has been "confirmed with a clarity and a level of confidence rare in the annals of education research" (Raywid 1999: 1). This summary quotes another study that found "a large body of research... (that) overwhelmingly affirms the superiority of small schools" (Cotton).

Look at El Puente Academy, a small high school, open to all, located in a low-income section of New York City. Less than 30 percent of the ninth graders attending a large high school nearby graduate in four years. However, more than 90 percent of El Puente's 9th graders graduate and go on to some form of post-secondary education.

Professor Anthony Bryk of the Center for School Improvement of the University of Chicago analyzed a number of studies from all over the country about the relationship between school size, cost, and quality. He found

> ...smaller high schools are more engaging environments and produce greater gains in student achievement.... These findings complement and extend a now-large body of research evidence that smaller schools are more productive work places for both adults and students. In these more intimate environments, teachers are more likely to report greater satisfaction with their work, higher levels of morale and greater commitment. Problems of student misconduct, class cutting, absenteeism, and dropping out are all less prevalent (Bryk 1994: 6-7).

CHICAGO PUBLIC SCHOOLS FOUND MANY BENEFITS from encouraging creation of small public schools of choice. The small schools that researchers studied served fewer than 350 students in the elementary schools and fewer than 400 students in the high schools. The most important findings were that in small schools

- student performance and test scores improved,
- violence occurred less frequently,
- conditions were more conducive for students to learn and for teachers to develop professionally, and
- parents and community members were more satisfied with the school (Wasley, *et. al.*).

In Chicago, the movement to create small schools within big schools was started as a means to improve student achievement. Educators found that many students who showed no interest in learning were academically on par with their peers around the country after moving to a small school. The smaller schools had goals such as increasing cooperation among teachers and helping all students learn how to apply the skills they learn (Joravsky). Small schools created out of large schools in Chicago have been a successful means of involving students, parents, and teachers in the process of educational reform.

What about cost? The classic argument is that even if large schools are not more effective, they are cheaper. This is not necessarily so. The Minnesota School of Environmental Science (or "Zoo School") with its student body of 400 was carefully designed to cost no more per pupil than other large high schools built in the same district. A New York City study found that smaller high schools cost somewhat more per pupil to operate, but when the cost of the school per graduate is calculated, smaller academic and alternative schools were less expensive than large high schools (Stiefel).

Sometimes people who argue for consolidating schools don't take into account the potential for increased transportation costs. In a booklet published by the National Trust for Historic Preservation, the authors urged communities to consider all costs when deciding whether to retain neighborhood schools. The National Trust report quotes a Maine State Planning Agency study, which found that between 1970 and 1995 the number of students statewide declined by 27,000. During the same period, school busing costs rose from $8.7 million to more than $54 million (Beaumont and Pianca).

The National Trust report includes other information showing how shared facilities can be an extremely efficient way to use tax dollars. Their report also points out that sometimes local or state regulations require more space than is necessary for a school building, especially if the school is sharing space with another organization that may have a gym, office, or other facilities the school can use.

What about the necessity of economies of scale, which some offer as an important argument for large schools? Bryk concludes

> ...the envisioned economies of scale here, however, are actually quite illusive. Moreover, whatever marginal efficiencies may be extracted is dwarfed by the overall ineffectiveness of these institutions. While school districts that are currently saddled with large physical plants might productively move toward schools-within-schools, there is little reason to continue to build more buildings like this. In light of the positive consequences for both adults and students associated with working in small schools, the reality is one of a dis-economy of scale (Bryk 1994: 6–7).

Some studies show how small schools have special benefits for students who are at risk or disadvantaged (Eckman and Howley). The correlation between poverty and low achievement can be as high as 10 times stronger in larger schools than in smaller schools.

But the value of small schools is not limited to low-income communities. As schools from suburban areas near Dallas, Portland, and Minneapolis show, even affluent youngsters can gain from attending a small school. (See case studies.)

Some worry that large schools will be able to offer a larger number of courses, but the number of course offerings has little relationship to student success. The quality of instruction is the most important determinant of student achievement and has no relationship to the number of courses offered (Eckman and Howley).

There are several ways to create smaller learning environments. One approach is to create a separate, free-standing small school. There are a number of excellent examples from urban, suburban, and rural communities. See, for example, the case studies for Alpha High School in suburban Portland, Academy for the Pacific Rim, the Nova Project in Seattle, and Minnesota New Country School in Henderson, Minnesota. Some urban and suburban communities have created small schools within large buildings. Students in suburban South Grand Prairie, Texas, for example, have the advantage of enrolling in one of five small schools in one large building and taking any Advanced Placement courses offered in any of the five schools. Students at the Campus Magnet High Schools, a large high school building in Queens, New York, have the benefits of a small high school, while taking a specialized legal, business, or dance class offered by a small school in their large building. Students at Wyandotte High School in Kansas City, Kansas, can enroll in any of eight distinctive schools in the larger building, as well as take courses at a local community college. Boston public school teachers created two small schools in a large building directly across the street from Fenway Park, the city's major league baseball stadium.

A growing number of communities around the country are creating small schools within larger schools to help students and teachers. The biggest value seems to come when they are designed as distinctive schools of choice, rather than "houses," which often are clones of each other.

The structure of a small school generally fosters a sense of community among teachers and students alike (Bryk and Driscoll, Bryk *et. al.* 1993). Small schools are founded on the idea that the success of a school is linked to its size, so by keeping enrollments small, students receive more personalized attention and the school is more manageable (Joravsky). Small schools can be more responsive to needs and

learning styles of the individual students. When this happens, students are more satisfied in their school environment (Lindsay, Burke), so they are

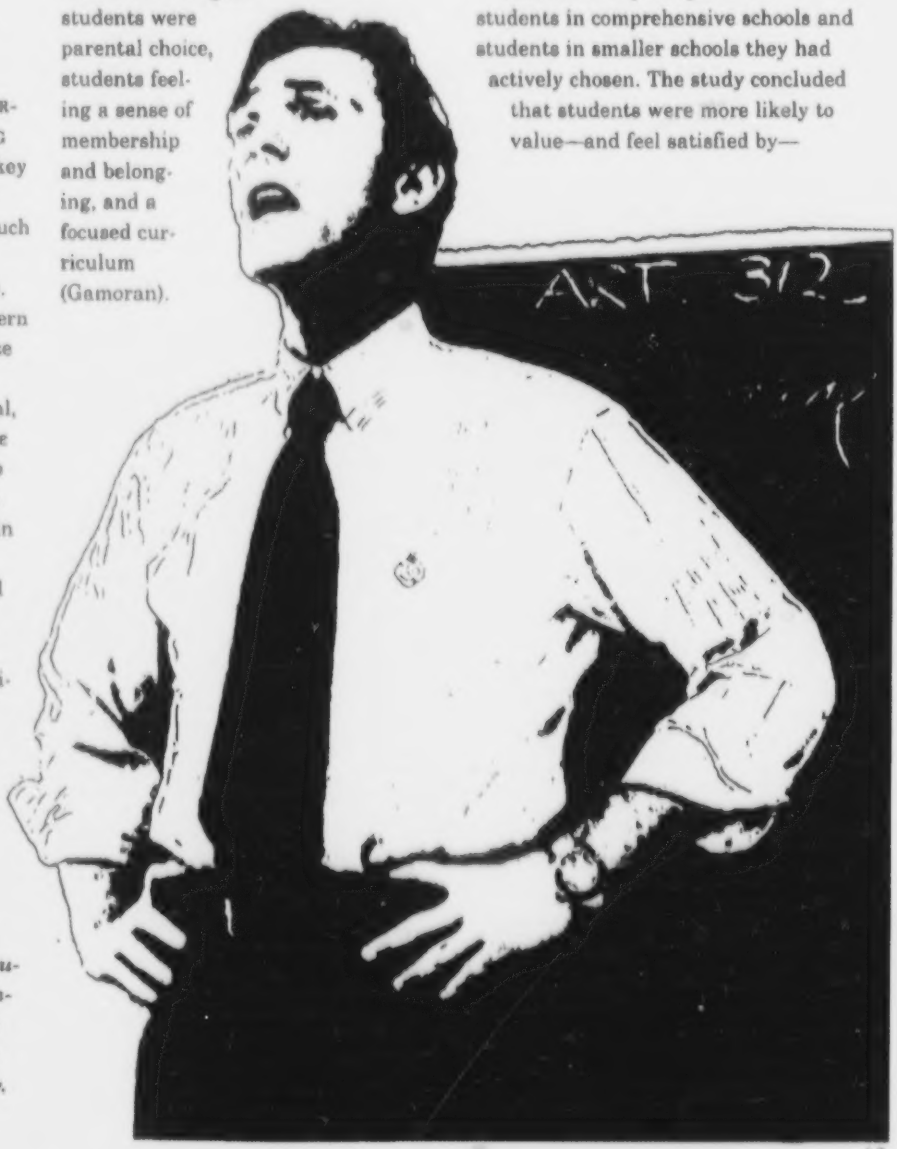
- more academically productive (Lee and Smith; Lee, Smith and Croninger),
- better behaved (Gottfredson),
- more likely to participate in after-school activities (Barker and Gump; Lindsay)
- less likely to drop out of school (Pittman and Haughwout).

AS THE NATION CONSIDERS THE IMPORTANCE OF ATTRACTING AND RETAINING TEACHERS, small schools can play a key role. A number of studies concluded that teachers in small schools are much more satisfied than are teachers in large schools (Bryk, Wasley, Raywid). A study of more than 2,400 Midwestern superintendents shows they recognize the importance of small schools in retaining faculty. In fact, urban, rural, and suburban superintendents whose districts have restructured schools to make them smaller rated this action the single most effective way to retain teachers (Hare).

Many of the most successful small public schools are schools of choice. They were actively selected by the families, students, and faculty. A variety of studies show the importance of allowing families to select among schools. One of the largest recent national studies on this issue compared the achievement of 24,000 eighth and tenth grade students in urban high schools. The study compared the achievement of students in large comprehensive high schools, Catholic schools, private schools, and public magnet schools. The author concluded that students in the urban magnet schools learned more and outperformed those in the other schools. Among the reasons for improved performance of magnet students were parental choice, students feeling a sense of membership and belonging, and a focused curriculum (Gamoran).

A 1996 study examined the achievement of students who had selected career academies. Some of these were schools within a large building, while others were schools within schools (e.g., Wyandotte High School or Campus Magnet Schools). Students who attended these schools of choice achieved more than comparable students attending schools to which they had been assigned.

Another study compared attitudes of students in comprehensive schools and students in smaller schools they had actively chosen. The study concluded that students were more likely to value—and feel satisfied by—



The quality of instruction is the most important determinant of student achievement and has no relationship to the number of courses offered. 13a: Faculty of Frederick Douglass Academy, New York City.

13

The first major benefit of co-location is the expanded learning opportunities for students. 14a: Early childhood education center at New York's Julia Richman complex, where high school students get first-hand experience caring for young children.

a program that they chose, instead of one to which they were assigned (Smith, Gregory and Pugh). Virtually all of the schools described in this report are open to all kinds of students. With only two exceptions, these schools have no admissions tests. Boston Arts Academy is a public school that requires a try out and Clark Montessori Junior-Senior High gives preference to students who previously attended Montessori schools. The evidence shows that small public schools are effective without having an admissions test.

Bob Barr and William Parrett, college professors who have studied public schools for more than 30 years, conclude that small schools—where faculty have a shared vision, offer a focused curriculum, and permit choice of participation—are "critical to the success of all students" (Barr and Parrett).

Deborah Meier is a New York City teacher who created a successful small school of choice in East Harlem in the early 1970s. She won a MacArthur Foundation "genius award" for her work. Meier believes that "...only in a small school can deep, ongoing discussion take place in ways that produce change and involve the entire faculty" (Joravsky).

THE EVIDENCE IS IN. When comparing similar groups of students, those who attend small schools of choice are safer, have better attendance and behavior, demonstrate higher achievement, and are more likely to graduate. The challenge is to learn from communities such as those cited in this report. We need to use the research.

Benefits of Shared Facilities

Many communities are learning that it is valuable for schools to share space with organizations like museums, nursery schools, day care centers, senior citizen programs, and businesses. Co-locating with another organization can have enormous benefits for a school's students, their families, and the broader community.

This is not a theoretical idea—many communities around the nation have used this concept and found widespread benefits. In a paper written for the Carnegie Corporation, researcher Joy Dryfoos described these places as "community schools" and reports that there is "a growing body of evidence that community schools are beginning to demonstrate positive effects on students, families and communities—many of these models have the capacity to produce multiple impacts that include and go beyond the expectations of traditional education reform" (Dryfoos, p.7).

The benefits of schools and other organizations sharing people and facilities are innumerable. Parham Elementary in Cincinnati; Northfield, Minnesota's Community Service Center; and El Puente in New York City—where human service programs and a school are housed in the same building to serve students and families—are but a few of the successful school-community centers to be found around the country. Services provided through a school-community center can include academic support, health care, family support, counseling, substance abuse counseling, senior citizen services, and job training services (Decker and Ringers).

THE FIRST MAJOR BENEFIT of co-location is the expanded learning opportunities for students. Consider the advantages of sharing space with a higher education institution, a museum, or zoo. Students at Arizona Agribusiness and Equine Center in Phoenix take courses at a community college that specializes in this subject because their high school shares space with the community college. Alpha students near Portland can take community college courses right in their building because their building shares space with a local community college. Students at the Minnesota School of Environmental Science find it easy to participate in internships on environmental science, study animals, and help prepare exhibits because their school shares space with the Minnesota Zoo.

Students at a public school located in one of the nation's largest malls, the Mall of America in Bloomington, Minnesota, are able to do a variety of things because of their school's location. They compare marketing and advertising strategies, look at how merchants try to attract people into their stores, and discuss advantages and disadvantages of being part of a national chain.

A growing number of public schools share space with museums. A Flagstaff, Arizona, school shares space with a museum in that town. A Dearborn, Michigan, school shares space with the Henry Ford Museum. There are many other examples. Students at these museum schools are able to apply what they have learned on a daily basis while contributing to the museum where their schools are located (Borden).

At the Julia Richman Complex in New York City, several high schools share space with an elementary school and an early childhood program. This means high school students can not

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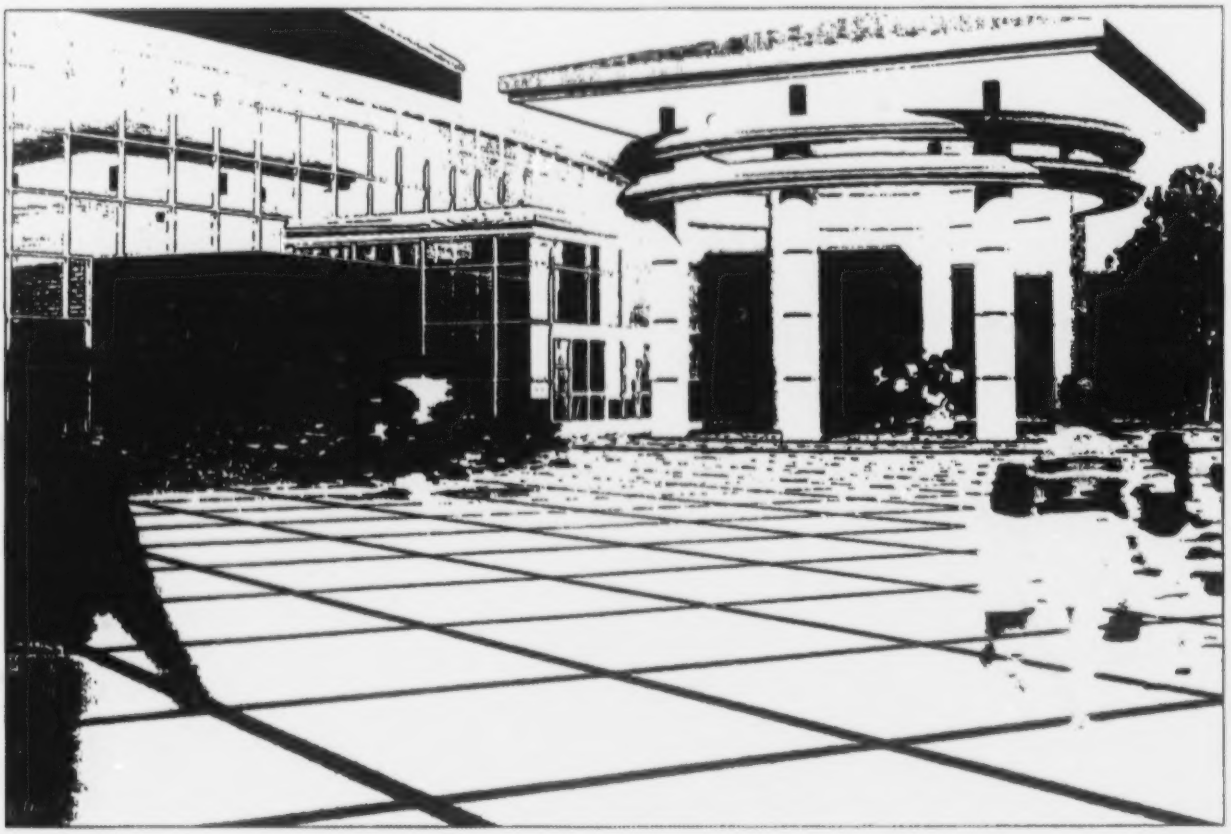


Shared facilities permit tax funds to be spent in an efficient manner. 16a: Architectural rendering for a Medina, Ohio, performing arts center being constructed by several community organizations for cooperative use.

only read about young children's behavior, but also study it in the early childhood program. Cincinnati's Parham Elementary School found that much more could be offered to students when faculty worked with a local agency named FamiliesFORWARD, which provides a vast array of courses and after-school programs to supplement what the faculty can do. As the case study explains, this collaboration helped move Parham from the K through 8 school in Cincinnati with the worst record to a school that received an award from the district and praise from the U.S. Secretary of Education for making huge progress.

A school that shares space with senior citizens can provide many opportunities for its students to interview seniors about their memories of key historical events and learn how these events affected the seniors' lives. Students who attend school at the Northfield Community Center in Minnesota enjoy both benefits because their school shares space with senior citizen programs and with early childhood education programs.

Public schools sharing space with businesses offer unique experiences. A recent report cites cases of schools that share space with the Miami-Dade airport, businesses in the downtown areas of Tampa and Des Moines, and large malls. The report mentions that one company creating malls has opened 12 schools in malls and has plans to open a total of 35 (Taylor and Snell). In these cases, the space is provided by the busi-

nesses involved, with the curriculum and faculty provided by the school district. There are many benefits. School districts save funds that otherwise would be used to construct facilities. Students gain from "unique educational opportunities afforded to them by the interaction with local businesses" (Taylor and Snell, Executive Summary). Schools also report higher levels of family involvement. And businesses report higher employee morale and lower turnover rates of employees—some of whom send their children to these schools.

A SECOND MAJOR BENEFIT of co-location is expansion of services for students and their families, particularly social services. In her book *Full Service Schools*, Joy Dryfoos provides a compelling argument in favor of providing social services for children within their schools: "The cumulative effects of poverty have created social environments that challenge educators, community leaders, and practitioners of health, mental health, and social services to invent new kinds of institutional responses" (Dryfoos 1994: xv).

At El Puente Academy in New York City, students and their families have access to an array of services, including health care, literacy training, and counseling, because these programs share space with the school. At Hamilton Elementary School in San Diego, the site of a school-community school initiative called New Beginnings, teachers are trained to identify problems that their students may be having and are familiar with the roles and services that the social service agencies within the school-community center provide. This allows the teachers to easily refer their students to an agency and then track their students' progress there. This is one of the best strategies for improving educational quality since the teachers are involved in the lives of their students beyond the time that they spend with them in the classroom (Institute for Educational Leadership).

One of the main goals of school-community centers, such as El Puente, Parham, and Hamilton Elementary, is the improvement of educational achievement by reducing social barriers to learning. This is done through better access to social services, which results in better family functioning and healthy youth development (Dryfoos). Schools sometimes find it difficult to meet the range of students' needs. By having immediate access to counseling, training, and health care professionals located in the same building, educators may be able to do a better job of helping young people reach their potential.

Provision of health care can be an important element of these collaborative arrangements. It is controversial, and some communities won't support it. But in analyzing the effects of health clinics in schools, Dryfoos found that:

- school clinics are utilized the most by the highest risk students,
- many of the students who utilize the clinic have no other source of medical care and no health insurance,
- absences and excuses to go home have decreased because minor illness can be treated at school, and
- users of school clinics have lower use of drugs, better school attendance, and lower dropout rates (Dryfoos: 2000, pp 134–35).

The following are just a few examples that show that improvements are occurring in the health and well-being of students, as well as in their academic achievement and behavior, when social services and schools work and live together.

- Charles Drew Elementary School in Philadelphia showed more improvement than any other school on the state's standardized reading and math tests.
- At Broad Acres Elementary School in Maryland, the number of families with no health care access was reduced from 53 percent to 10 percent and the number of families with no health insurance coverage was reduced from 38 percent to 10 percent.
- At Lane Middle School in Portland, Oregon, suspensions declined from 50 to 15 over a two-year period (Dryfoos).

In many cases it is not only the student who needs support, but also his or her family. When a school community center shares facilities with social service agencies, the benefits of the shared facilities allow both children and families the best access to programs that will serve their needs and allow the students a much better opportunity to succeed in school. Some shared school-social service facilities have the added benefit of bringing multiple social services together. Combining social service agencies within a school can be enormously beneficial because often the programs that social service agencies provide to low-income families are uncoordinated and inconsistent and, thus, ineffective.

Families often do not know how or where to access services that could help them. When different social service agencies are together in the same building and are able to coordinate their eligibility procedures, families are better able to find the help that they need, are able to do so quickly and efficiently, and know where to go in the case of an emergency. Assistance from social service agencies is most effective when the entire family is helped, rather than just individual members. If families are successful and their needs

are met, then their children will perform better in school (Institute for Educational Leadership).

Social services are not the only kind of services that can be made available to students through a shared facility. Some schools share space with a city or county library, dramatically expanding the range of books, computers, and other materials available for student use. The day care center located at New York City's Julia Richman Complex allows young mothers to leave their children in a high quality program while they attend school. They also learn how to be better parents because of the training offered by the program. Students at St. Paul's City Academy have access to excellent physical fitness equipment and facilities their school might not otherwise be able to afford. Because the school shares space with a city recreation program, the recreation center facilities are available for their students.

A THIRD MAJOR BENEFIT of co-location is that it allows a community to offer programs, facilities, and services that it might otherwise not be able to afford. The northwestern Minnesota community of Perham created a marvelous community recreation building, open from early in the morning until late at night. Neither the city, the school district, nor local businesses could afford to construct, maintain, or operate the center by themselves. But by working together, they can. The story is the same in Northfield, Minnesota. The Northfield Community Resource Center is the product of collaboration among five organizations, including the city, local school district, senior citizens program, and two anti-poverty agencies. Together they were able to create and operate a marvelous, state of the art center that none of the groups could afford by itself.

High schools in Twinsburg and Medina, Ohio, are using the same principles. Twinsburg is a suburban town near Cleveland. A community fitness center, next to the high school, is managed by the City of Twinsburg. It includes a swimming pool, diving well, a field house with a six-lane track and three athletic courts, locker rooms, offices, and childcare and reception areas. The facility is used both by high school students and the broader community (Fanning/Howey a).

The Medina School District and several community organizations are doing something both similar and unique. The local hospital will lease a part of the community center and supply staff, equipment, and other resources. A new auditorium with an orchestra pit and seating for 1,200 is being constructed. A local performing arts foundation has pledged $200,000 to help fund construction, and will operate the auditorium (Fanning/Howey b). Co-location of this type means that tax funds are being stretched and spent in a much more efficient manner. This is good news for taxpayers, as well as those responsible for administering tax funds.

A FOURTH MAJOR BENEFIT of shared facilities is that it creates more time for families to spend together. A number of "work site" public schools, such as those in Miami, Des Moines and St. Paul, are open to workers in the immediate area. So, for example, many families whose children attend the Downtown Kindergarten located in a St. Paul bank, or the school at the Miami-Dade airport, drive to and from work with their children, have daily contact with their child's teachers, and sometimes have lunch with them. This permits more time for parents to spend with their children, something many busy families appreciate.

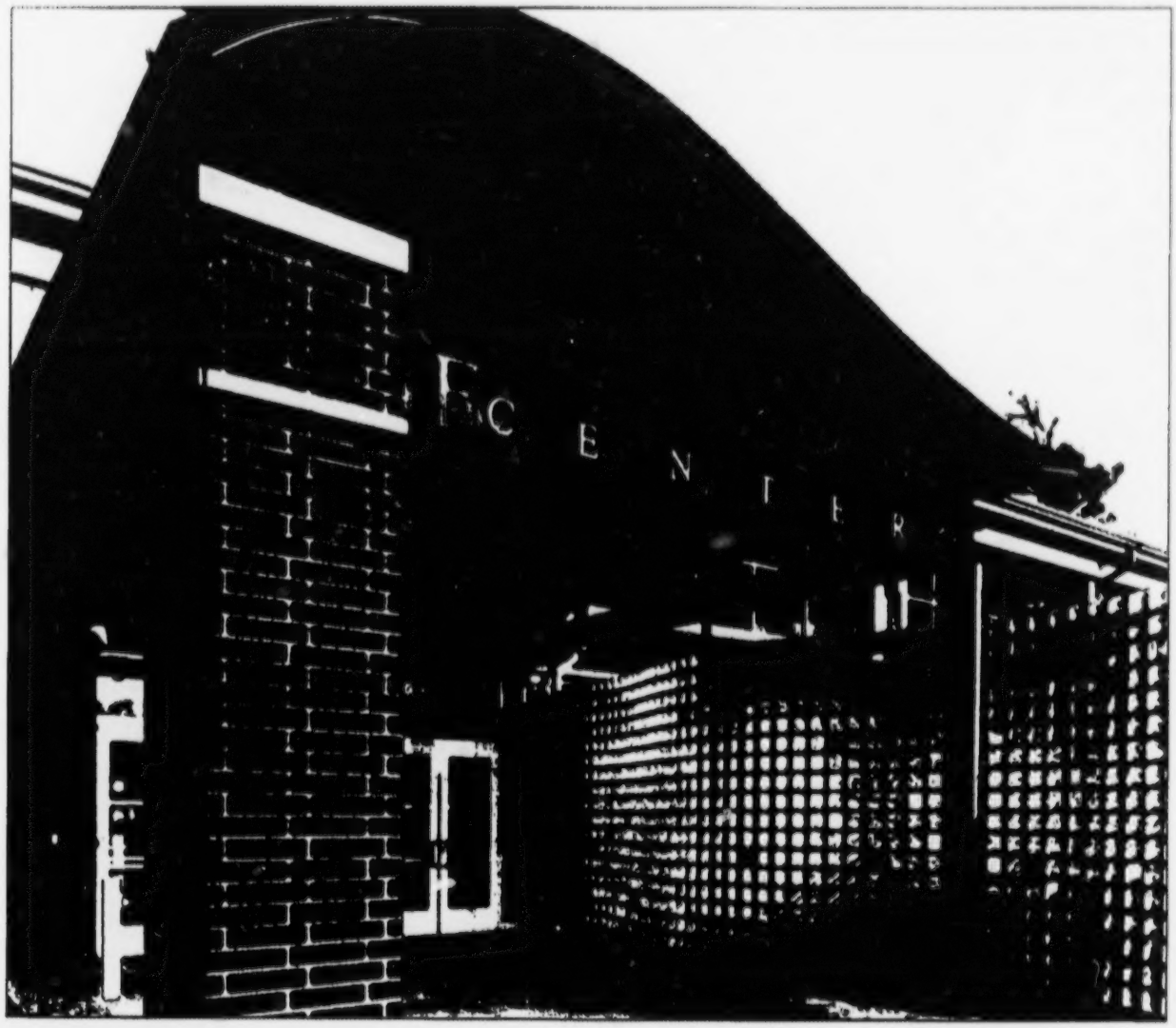
Educators and community leaders in other countries are seeing the benefits of small schools and shared facilities. In the Netherlands, for example, two elementary schools recently have been constructed with these ideas in mind. In Vleuten, an elementary school has been built directly under a new apartment building serving families and senior citizens. Part of the idea is that it will be easy for senior citizens to volunteer in the elementary school located directly under their apartment. A number of senior citizens are doing just that.

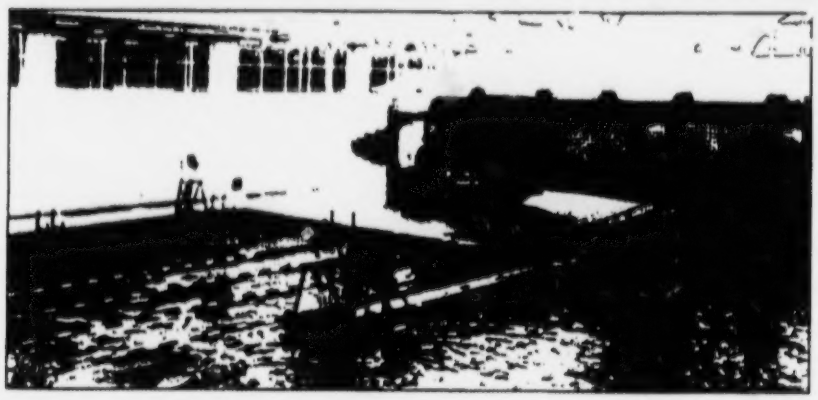
Another Dutch elementary school has just been built in Deventer, on the second story of a store in a commercial area. Part of the idea here is that it is easier for students to study real world examples in, for example, mathematics. Students study percentages and decimals and then visit some nearby shops where they can see how math is being used in business. The school includes an outside play area and gymnasium.

Aurora Charter School in Edmonton, Alberta, illustrates another example of the co-location idea. This school is housed in a multi-story building owned by a local hospital. Some of the hospital's programs are located in the building. Sharing space allows students to easily learn more about careers in medicine, as well as to discuss health and science issues with hospital professionals.

In June 1998, the U. S. Department of Education convened educators, facilities planners, architects, government officials, and interested citizens to discuss the idea of community schools. This group developed six key principles, that should be a part of designing new schools. They suggested communities should design schools that

- enhance teaching and learning and accommodate the needs of all learners,





A major benefit of co-location is that it allows a community to offer programs, facilities, and services that it might otherwise not be able to afford. 19a and 19b: Twinsburg, Ohio, fitness center.

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Making schools "true centers of the community seems to make a lot of sense. It avoids costly duplication of facilities and structures, it allows underused schools to be used many more hours per day and year."

- serve as centers of the community,
- result from a planning/design process involving all stakeholders,
- provide for health, safety, and security,
- make effective use of all available resources,
- allow for flexibility and adaptability to changing needs.

(U.S. Department of Education)

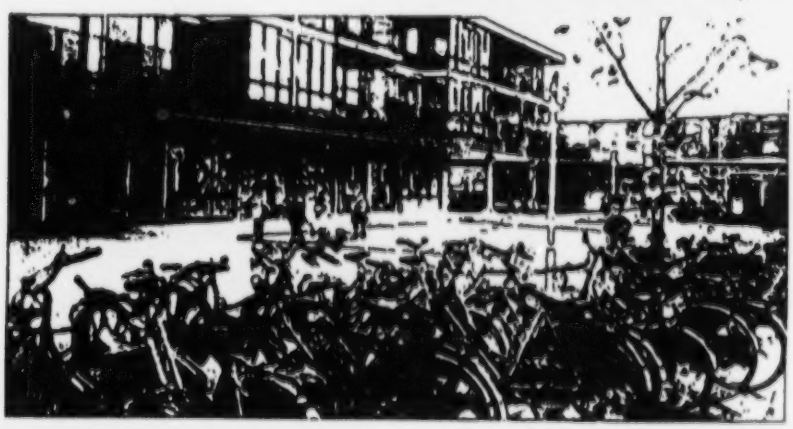
Since 1989, the Children's Aid Society has worked with New York City schools to create a few school-community centers. The results have been very encouraging—increased student achievement, better attendance, and a much closer, more positive working relationship between the schools and families they serve. This experience led Phillip Coltoff, Executive Director of the Children's Aid Society, to write, "It is absolutely possible to radically transform our schools into powerful

institutions that offer children, their families, and entire communities true hope for a better future" (Coltoff, p. 7).

A thoughtful report from the North Carolina Department of Public Instruction summarizes experience with shared facilities: Making schools "true centers of the community seems to make a lot of sense. It avoids costly duplication of facilities and structures, it allows underused schools to be used many more hours per day and year" (North Carolina, p. 24).

The report concludes, "true community schools (which also provide other community services), can save local taxpayers significant sums of money, reduce depletion of limited natural resources, and limit sprawl." The report does not say sharing facilities is easy: "When conflicts arise (and they will) each agency must be willing to work together ... to solve conflicts or problems ..." (North Carolina, p. 24). However, as that report, and the following case studies show, conflicts can be overcome. Families and students will benefit.

The next section offers brief case studies of schools carrying out these principles of small school size and/or shared-co-located facilities. The case studies include both district run public schools and charter public schools. We know enough to do much better. We hope the following examples will encourage and assist people who want to make a difference for students and their families.



20a and 20b: A school in Deventer, Netherlands, is built on the second story of shops in a commercial area. 21a and 21b: A school in the Dutch city of Vleuten is built underneath an apartment complex, helping promote contacts among students, parents, and senior citizens who live above the school.

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Academy Charter School

CASTLE ROCK, COLORADO

From the outside, it looks like a store in a small one-story shopping mall. From the outside, it's almost impossible to imagine what's happening inside. But a great deal is happening inside. The Colorado Department of Education has named Academy Charter School one of the state's outstanding public schools, based on significant improvements in student achievement. Open to all kinds of students, Academy was started in September 1993 by a group of parents who were not satisfied with the programs available in their suburban/rural district.

KEY EDUCATIONAL FEATURES. The school's 419 students, enrolled in grades K through 8, reflect the range of academic abilities, from disabled to gifted. About 14 percent of the students have some form of disability. In fact, some have been classified as both handicapped and gifted.

Walking into the school, you might see students building a model of the Parthenon with Lego blocks or rehearsing a play, loosely based on classic Greek plays, that they have written about ancient Greece. Among other instructional practices, students use some of the latest compact discs to study history, geography, and mathematics.

The school combines innovative teaching techniques with some conservative ideas about curricula. Parents and teachers believe in using a balanced language arts program to teach students to read. There are periodic spelling bees, and students are expected to act respectfully toward each other and the faculty. The school also uses the Core Knowledge Curriculum developed by E. D. Hirsch. The Lego blocks and plays written by students are just two examples of the eclectic approach used at Academy. One staff member describes the programmatic approach as "pragmatic education."

KEY ARCHITECTURAL FEATURES. The school is located in Castle Rock, a community about 25 miles south of Denver, in a rapidly growing area between Denver and Colorado Springs. Academy was originally housed in four bays in a small shopping center. As one staff person explained, "parents did everything you can imagine to get that space ready for kids." They painted, hung dry wall, laid carpets, and built walls. But the shopping center was near railroad tracks, and the school's interior spaces were not connected. So parents and faculty found and rehabbed the current home. The school is now constructing another home, to be called The Lifelong Learning Center, which will house Academy Charter and, in the future, a high school and college.

IMPACT ON STUDENTS. As measured by Iowa Tests of Basic Skills, academic achievement has shown steady improvement and the Douglas County School Board has renewed the school's contract. Academy Charter School also has been selected as a Colorado School of Excellence by the Colorado State Department of Education.

FOR MORE INFORMATION. Contact Kindra Whitmyre-Nelson, Dean of Elementary, or Brad Bylsma, Dean of Middle School, Academy Charter School, 809 N. Park Street, Castle Rock, Colo. 80104; (303) 660-4881.

24a: Named by Colorado's State Department of Education as one of the state's outstanding public schools, Academy Charter School uses a former grocery store as its home.

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Academy of the Pacific Rim Charter School

BOSTON, MASSACHUSETTS

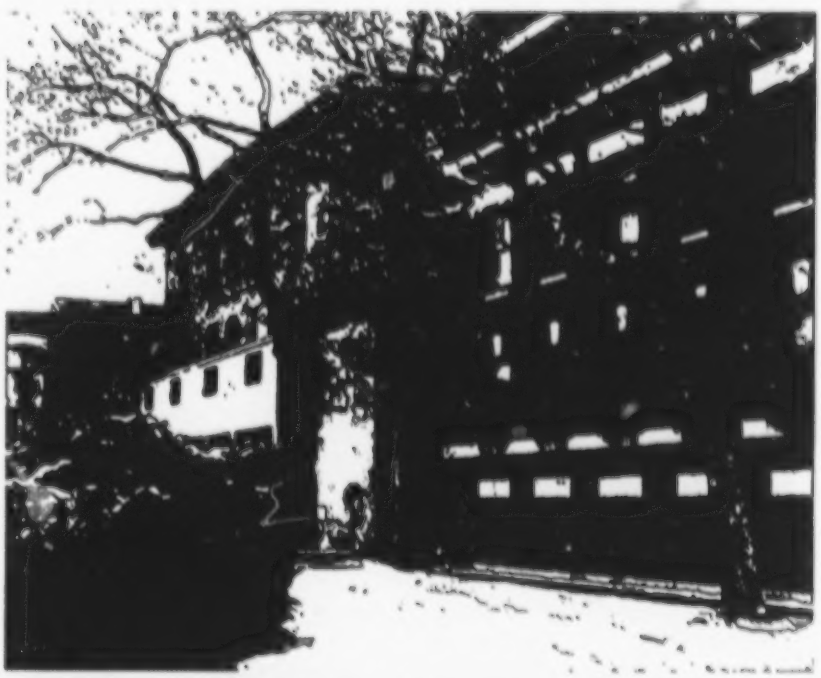
Imagine an inner city public school, open to all, which uses the best ideas of the Asian and Western education systems. Every class starts and ends with students (grades 6 through 10) and teachers standing and thanking each other for their efforts.

KEY EDUCATIONAL FEATURES. Every day the Academy of the Pacific Rim begins with an opening ceremony featuring student skits, announcements, and presentation of the *gambatte* award. The Japanese use this term, which translates as "persist, keep going," to end conversations in much the same way Americans say "see you later" or "take care." The award is presented to a student in recognition of his or her hard work.

Students attend school from 8:05 a.m. to 4:10 p.m., 210 days per year. (The typical school year in the Boston Public School system is 180 days.) Each teacher has two prep hours a day, a computer, and a telephone with a private extension. Each faculty member advises six to eight students. The faculty also sends weekly student progress reports home to parents. Students in grades 7 and higher study Mandarin.

Academy teachers also apply the best American ideas about active, "hands-on" learning. When eighth graders study the Constitution, each student researches a person at the Constitutional Convention and reenacts that person's role, while wearing a costume of the era. Sixth grade math students practice decimals and percentages as they create restaurant menus. The curriculum is diverse, incorporating the literature of many cultures. For example, eighth graders read Shakespeare's *Macbeth* and Maya Angelou's *I Know Why the Caged Bird Sings*. Ninth graders read plays such as *Othello* and books such as *The Autobiography of Malcolm X* and Anne Frank's *Diary of a Young Girl*.

The academy serves 243 students and is growing by about 60 students per year. In two years it will expand to include grades 11 and 12, yet still enroll less than 400 students. Half of the students are from low-income



25a: Academy of the Pacific Rim shares space with several businesses in a former carriage factory that is over 100 years old. 25b: Students study martial arts to become more physically fit and develop stronger self-discipline. 25c: Each teacher has a desk with computer and phone, reflecting the school's emphasis on treating faculty as respected professionals.

families and more than 75 percent are "students of color"—primarily African American.

The faculty is rewarded financially when students make academic progress. Academy of the Pacific Rim uses the budget and personnel flexibility that comes from being a charter school to develop these incentives, along with its innovative program. But schools don't have to be charters to learn from this powerful program.

Key architectural features. The school's building, constructed in the 1880s, originally was a carriage factory. Stairways feature quotations urging students to make the most of their skills, talents, and energy. The building houses several other businesses.

Impact on students. Despite being open to a cross section of students, academy students score among the highest on required statewide tests of any Boston public school. In fact, the students score higher on these tests than any school except a couple of Boston public schools at which students must score very well on an entrance exam to be admitted. The school also has an excellent record of retaining students, with a far lower mobility rate than most Boston public schools.

For more information. Contact Spencer Blasdale, Director, Academy of the Pacific Rim, 617-361-0050, One Westinghouse Plaza, Hyde Park, Mass. 02136; see *www.pacrim.org*.

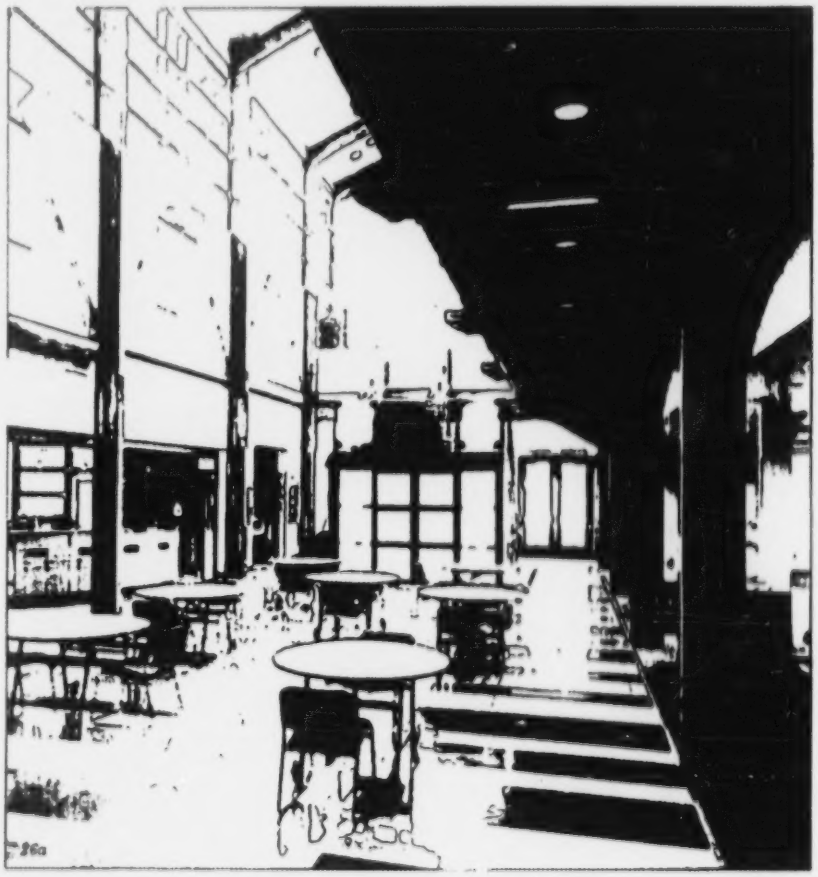
Alpha High School

Portland, Oregon

This award-winning school shows how architects, educators, and community groups can work together to create highly effective education for youngsters with whom traditional large schools have failed. Alpha High School serves 150 students in grades 9 through 12 and has been in operation for 20 years. In 1999 the school moved into a new 16,000-square-foot building.

Key educational features. The school's small size helps create a family environment in which each student is known well by at least some of the staff. The faculty has created many partnerships with business and community groups, making it possible for each student to work in the community. Most students spend three hours a day in school programs and three hours in work-related activities.

Alpha's philosophy encourages young people to prepare for the world of work and become involved citizens. The faculty has found that these students learn best through active, hands-on experiences. Every student examines several possible careers through classroom study and then by observation at community sites. Gradually,



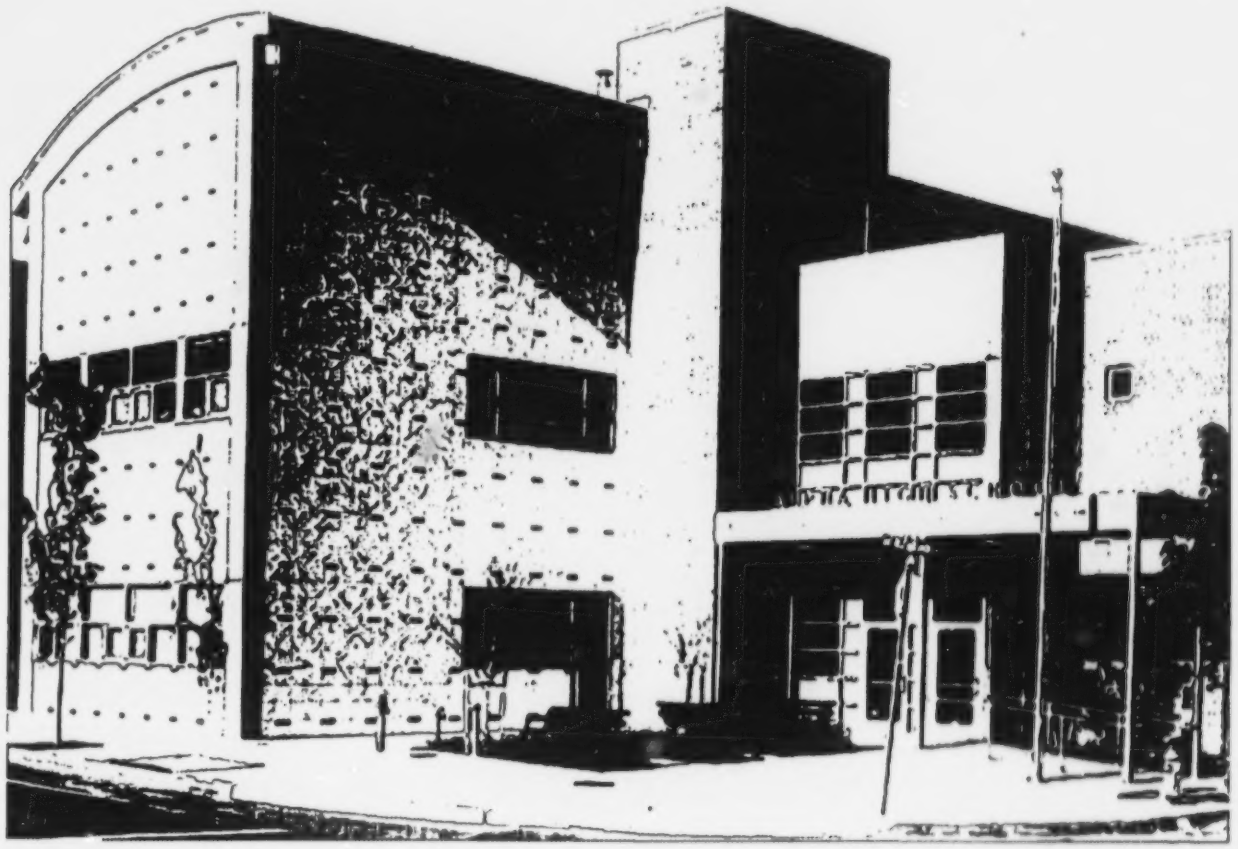
students pick a career on which to focus and develop the skills needed to succeed in this field. The school also has an extensive service learning component that allows students to work with various community agencies, helping with young children, senior citizens, local government and other groups. Alpha's faculty regards assisting young people as they explore possible careers and learn how to make a difference for others as a vital part of the program.

Students' progress is monitored regularly. Each student has an individual education evaluation, a learning plan, and the opportunity to select job sites for exploration and study. Students prepare portfolios showing their work, and each student meets weekly with a teacher to review progress.

KEY ARCHITECTURAL FEATURES. The building has received a number of honors, including the AIA National Honor Award in 1999, and a Certificate of Excellence and an "Outstanding Design Award" from *American School and University* magazine. The building has several unusual features, including:

- movable walls, allowing faculty to change the size of the rooms;
- mobile storage cabinets, teacher stations, student project lockers, tables, computer cards and desks; and

26a and 27a: Alpha's award-winning building allows the school to share space with several community groups, adding learning opportunities for its students.



28a: Some of Alpha's walls are movable, giving faculty and students valuable flexibility.

- a location adjacent to a light-rail station and bus transit, making it easily accessible via mass transit.

The building functions as a shared facility, with college courses offered in the evening, meeting space used by community members, and a state-funded community employment center located in the building.

IMPACT ON STUDENTS. One hundred percent of the class of 2000 graduated. Ninety-seven percent of the students are employed upon graduation. Alpha has had a 95 percent graduation rate over the last several years and a 78 percent retention rate while working with students considered "at risk." The school's 78 percent retention rate compares very favorably to the 70 to 72 percent retention rate for Portland metropolitan area high schools.

FOR MORE INFORMATION. Contact Principal, Alpha High School, 876 NE 8th Street, Gresham, Oregon. 97030; (503) 262-4050, or visit *www.stateoforegon.com/gresham/alpha_high_school.*

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Arizona Agribusiness and Equine Center

PHOENIX, ARIZONA

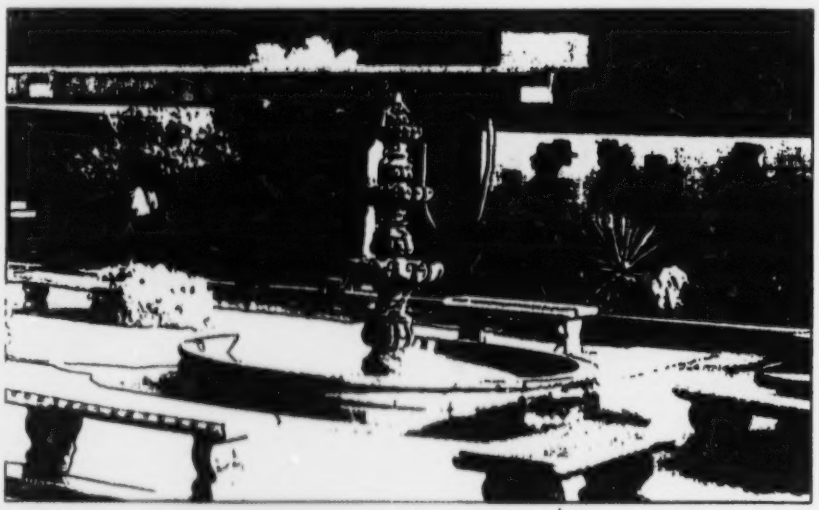
"It's important. And it's real." That's how one teacher describes experiments high school students are doing at the Arizona Agribusiness and Equine Center in Phoenix. This public charter high school shares space with South Mountain Community College. Part of of the idea of co-location is sharing facilities, including science labs, with the college. And part is to encourage students to excel and understand how they can improve the world.

KEY EDUCATIONAL FEATURES. Recently, some of the center's students tried to reduce or eliminate the number of insects attracted to the Madagascar Periwinkle plant. By injecting bacteria into the plant's roots, students found that after four weeks the plants would be 100 percent free of a common Arizona insect, the whitefly. These bacteria, which keep insects away, don't appear to have any detrimental effects. Untreated plants were infected with the flies after four weeks in the same growing environment.

Who cares? Periwinkle is a beautiful little plant that grows throughout Arizona. But in addition to beauty, the plant provides chemicals that help treat leukemia. Keeping insects away allows the plants to grow stronger. Such important lessons can come from working with little plants, growing quietly on a shelf. But student work is attracting a good deal of attention. Some of the school's students have earned an Associate of Arts degree from the community college shortly before they graduated from high school.

The Center's faculty includes certified public school teachers and community college instructors. The school specializes in applied sciences, mathematics, and agricultural fields. Students take classes at the college, participate in internships, and often go on field trips to extend their knowledge and learning. The Center enrolls about 120 students in grades 9 through 12. Its student body is more racially diverse than the local school district. The school has opened a second program, which also is located on the campus of a community college.

KEY ARCHITECTURAL FEATURES. Although the school's headquarters are located in a building at the edge of the college, students use all of the college's facilities, including classrooms, labs, libraries, computers, and fitness center. The college library also serves the neighboring community. The community college uses the school's classrooms in the evening and on Saturdays. The community college president says he would encourage other colleges to develop similar partnerships: "It's provided great benefits to our students."



29a and 29b: The Arizona Agribusiness and Equine center shares space with South Mountain Community College. This gives the school's students access to college facilities, including a fitness center and lounge areas. The students also can take courses from college faculty.

30a: Murals and other art on the AAEC and South Mountain Community College campus reflect themes of the Southwest.

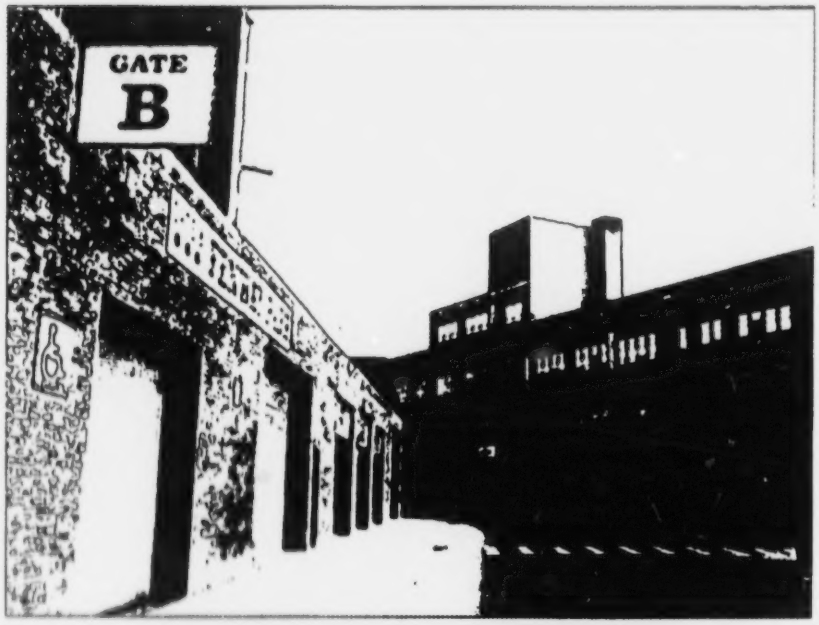
IMPACT ON STUDENTS. Stanford 9 Test scores, required by the state, show that the Center's students score well above both county and national averages in reading, mathematics, and language in grades 9 through 11. Even though there is no admission test to the school, many of its students are taking college courses as part of their high school experience.

FOR FURTHER INFORMATION. Contact Don Krug, Principal, Arizona Agribusiness and Equine Center, South Mountain Community College, Phoenix, Ariz. 85040; (602) 243-8004.

Boston Arts Academy and Fenway High School

BOSTON, MASSACHUSETTS

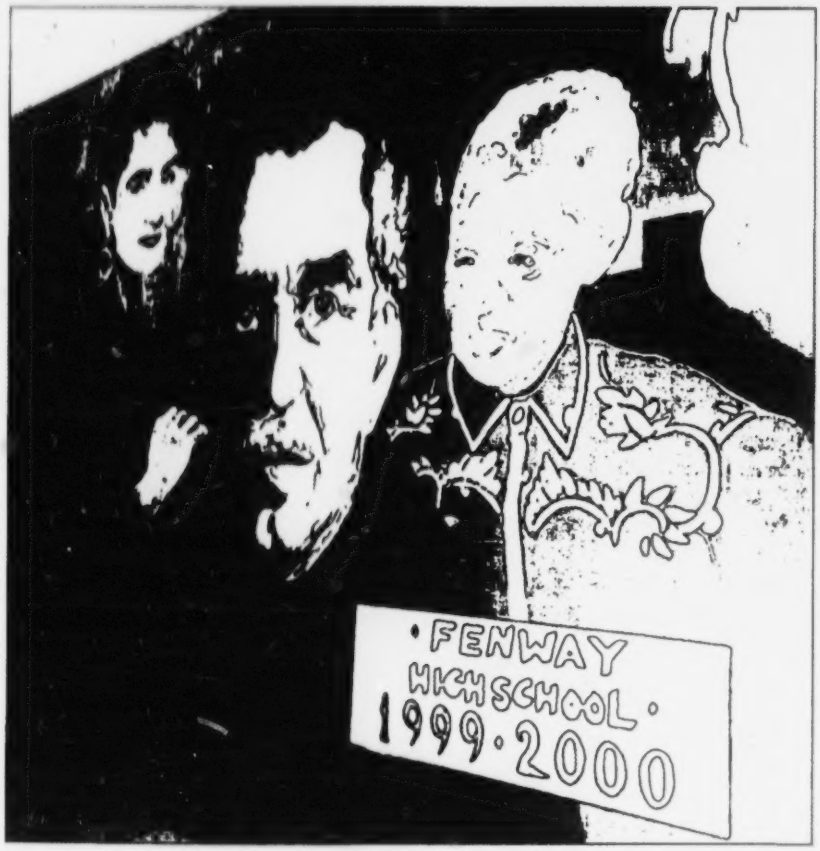
Take an old industrial building directly across the street from Fenway Park, Boston's historic baseball field. Give teachers the opportunity to create new public high schools. The result is a building with two popular, distinctive public high schools—the Boston Arts Academy and Fenway High School.



BOSTON ARTS ACADEMY

KEY EDUCATIONAL FEATURES. Boston Arts Academy opened in September 1998 and serves about 400 students (grades 9 through 12) who were selected via application and auditions. The school is a collaboration between the Boston Public Schools and six internationally known institutions specializing in visual arts, performing arts, and architecture. The school day is longer Monday through Thursday, which allows the academy to dismiss students at noon every Friday to participate in weekly in-service work.

Many of the academy's students are planning to be artists and will need to know how to write a successful grant proposal. In the spring of 2000, students wrote proposals, some of which were funded with grants the school has received. Of the 50 seniors who submitted proposals, 20 were funded.



FENWAY HIGH SCHOOL

KEY EDUCATIONAL FEATURES. Founded in 1983, Fenway is now in its 18th year. It is one of the pioneers of the small schools movement. Named one of the first "New American High Schools" by the U.S. Department of Education,

31a: (previous page) The two schools are housed in a building across the street from Boston's Fenway Field. 31b: (previous page) Student artwork is featured throughout the building. 32a: Sharing space with the Boston Symphony Teacher Resource Center brings students together with community residents.

it has been designated as an "exemplar" by the Coalition of Essential Schools. Fenway High School enrolls 300 students (55 percent African American, 20 percent Hispanic, 20 percent Caucasian and 5 percent Asian) in grades 9 through 12.

Fenway uses an advisory system, so each student is known well by at least one faculty member. Each faculty member has about 20 advisees, with whom they meet several times a week. Many of the students have the same advisor for 3 to 4 years. Students are grouped into learning families called houses.

Fenway requires students to demonstrate business skill and knowledge prior to graduation. About 90 community members come into the school twice a year to help judge student projects and tell the students how well they are doing compared to "real world" expectations. An internship with a community agency or business is required for graduation. Fenway collaborates with community agencies, business, colleges, foundations, and organizations such as the Boston Museum of Science, a chain of pharmacies, and Harvard Medical School to extend learning beyond the school classroom.

KEY ARCHITECTURAL FEATURES. The schools are located in an old, former industrial building near many major Boston arts organizations. The building's library is shared with both schools and with the Boston Symphony Teacher Resource Center, thus allowing it to be open longer hours, including every Saturday. The library is open to 6 p.m. three evenings a week and every Saturday morning.

IMPACT ON STUDENTS. Both schools are strong advocates for assessing students' performance in various ways, including classroom-based diagnostics, portfolios, exhibitions, standardized tests, work internships, integrated projects, and college acceptance. Surveys of employers show that Fenway students are very good on the job and great team players. Eighty-five percent of Fenway's students come in at ninth grade failing state and nationally normed standardized test. Four years later, 80 to 85 percent from Fenway enter college. About 90 percent of the Boston Arts Academy's first class went to college.

FOR FURTHER INFORMATION. Contact Larry Myatt, Director, Fenway High School, 174 Ipswich Street, Boston Mass. 02215; (617) 635-9911; *www.fenway.boston.k12.ma.us*. Contact Linda Nathan, Headmaster, Boston Arts Academy, 174 Ipswich Street, Boston, Mass. 02215; (617) 635-6470; *http://artsacad.boston.k12.ma.us/*.

Buffalo King Center

BUFFALO, NEW YORK

A church closes in a run down, low-income area of the city. It's a beautiful place with a 100-foot-high ceiling and stained glass windows. The church was completed more than 100 years ago and has served generations of parishioners, but they have died or moved to the suburbs. No congregation wants it. What to do? In Buffalo, New York, the answer is to create a charter school for elementary students. The award-winning King Center is the product of creativity and commitment.

KEY EDUCATIONAL FEATURES. Eighty students in grades K through 4 currently attend the school. Designed by experienced inner city public school teachers and administrators, the school's program features extensive hands-on learning with both book and computer-based materials. The school plans to increase the number of students in the next few years. Partners in the school include the Teacher Preparation Programs at Houghton College, State University of New York at Buffalo, Buffalo State College, and the State University of New York at Fredonia.

KEY ARCHITECTURAL FEATURES. The school operates in the sanctuary of the former church, which opened in the 1880s. The pews have been removed to create classrooms. Students can look up and see the high ceiling and stained glass windows. The Yale University Bush Center in Child Development and Social Policy designated the King Center New York's first "School of the 21st Century" in recognition of the

extensive collaborative efforts of the program and its efforts to help children in all areas of development. The building was also awarded a Silver Citation in the American School & University Educational Interiors Showcase.

Each classroom is equipped with a video camera and microphone. It's possible for people not in the classroom to observe the teacher and students. In the area where the altar once stood, a new enclosed classroom has been created for college students. Prospective teachers sitting in the tech room can watch and listen to students and their teacher in the school, without being physically present in the classroom.

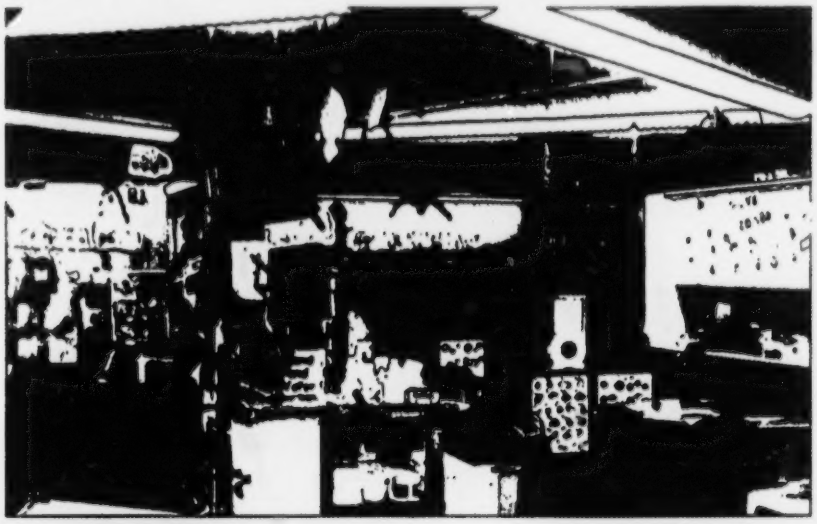
Called a Visual Learning Collabotory, this classroom is connected via fiber optic cable with the University of Buffalo, Buffalo State, Fredonia and Houghton. Pictures and sound from King Center classrooms can be sent via cable to classes being held on these campuses.

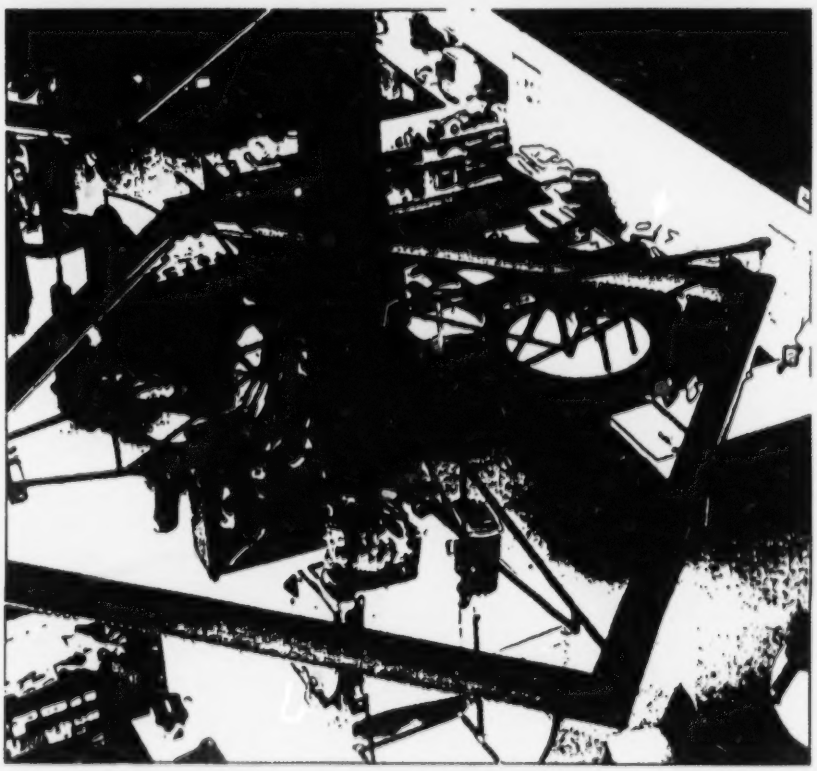
Development of the King Center has helped stimulate other neighborhood improvements. For example, a building, adjacent to the church that was a crack house and house of prostitution has been transformed into a health center.

Impact on students. The 2000–2001 academic year is the school's first year of operation, so data is not yet available about student growth.

33a: (previous page) The stained glass windows and high ceilings add an unusual beauty to the King Center's Interior. 34a and 34b: The King Center's bright classrooms sparkle in the more than 100-year-old building, which formerly was a church.

FOR FURTHER INFORMATION. Contact Dr. Claity Massey, Director, King Urban Life Center, 938 Genesee Street, Buffalo, N.Y. 14211; (716) 891-7912. *www.kingurbanlifecenter.org.*





Campus Magnet Schools

QUEENS, NEW YORK

Andrew Jackson High School in Queens, New York City, had served 2,000 plus students a year since the mid-1930s. By the early 1990s, however, the school was suffering from classic urban problems—a high dropout rate, low test scores, and frequent disciplinary incidents. Educators, parents, and community leaders developed a solution that has produced many positive benefits—the Campus Magnet Schools, a complex of four, discreet small schools located on a single site.

KEY EDUCATIONAL FEATURES. In September 1994, freshman and sophomores at the high school were given the opportunity to choose among the four new schools, which included

- Business, Computer Applications, and Entrepreneurship;
- Humanities and the Arts;
- Law, Government, and Community Service; and
- Mathematics, Science, Research, and Technology.

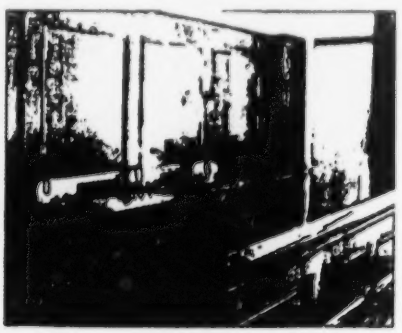
Today, each school enrolls about 525 students in grades 9 through 12. Each school has a distinct philosophy and offers unique programs. Students spend most of their time taking courses in their home school, but may take specialized courses at the other schools. For example, students from several of the schools are enrolled in a dance class at the Humanities and the Arts School. Other students are taking a virtual enterprise business class in the Business and Computer School. Each school

benefits from partnerships with individuals, groups, and community-based organizations that focus on their specialties. A former judge, for example, donated many law books to the Law, Government, and Community Service School.

KEY ARCHITECTURAL FEATURES. The four schools are located in a large facility that has been serving students for 62 years. One library serves all the schools, acquiring publications centered on the key interests of each. The four schools occupy separate sections of the building and have distinctive classrooms that reflect their specialties. For example, a raised judge's desk and jury box occupy a classroom in the Law, Government, and Community Service School. The Humanities and the Arts School features well designed electronic and dance studios. The building has one set of New York City school district sports teams, which represent all students at the Campus Magnets. The 1999 4-by-200-meter indoor relay team was named All American because of its outstanding record.

IMPACT ON STUDENTS. Creating four small, distinct schools of choice has had positive results. School officials report that in every major way the city measures schools, there has been progress since converting from one large school to four smaller schools. Attendance, achievement, and graduation rates have all improved. Suspensions, discipline problems, referrals to special education, and dropout rates have declined. The Magnet Schools are being viewed as models for a number of large New York City high schools as they begin to restructure.

FOR FURTHER INFORMATION. Contact Eileen Davis-Jerome, Principal, Humanities and the Arts, (718) 978-2135; Andrea Holt, Principal, Mathematics, Science, Research and Technology, (718) 978-1837; Milton Lipitz, Principal, Business, Computer Applications, and Entrepreneurship, (718) 978-2807; and Carole Kelly, Principal, Law, Government, and Community Service, (718) 978-6432. The mailing address for each school is 207-01 116 Avenue, Cambria Heights, Queens, N.Y. 11411.



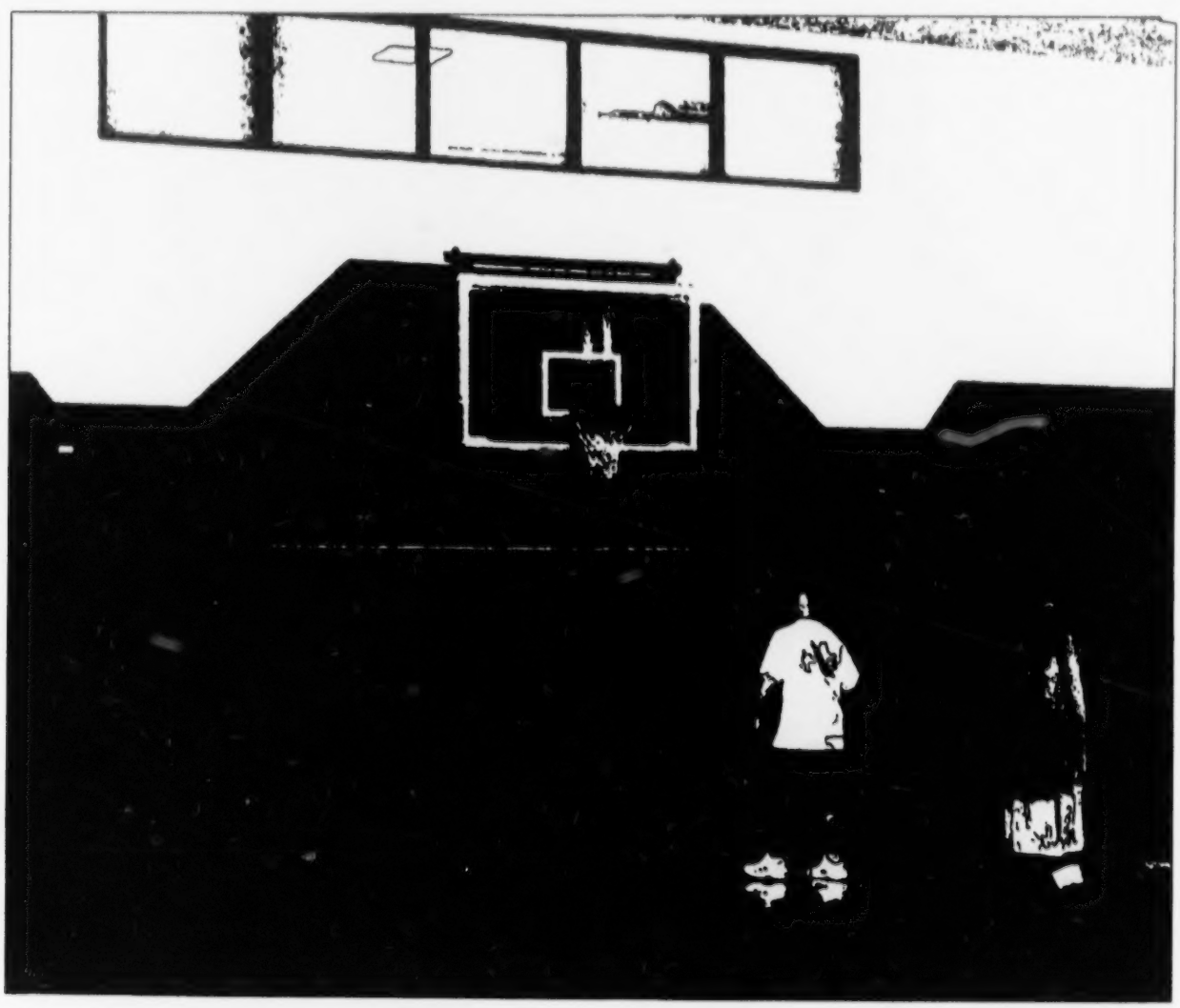
35a and 35b: Campus Magnet shows how a large building can be modified to house four small schools. Each of the schools has distinctive rooms that reflect its focus, such as the mock courtroom in the Law, Government and Community Service High School.

City Academy

St. Paul, Minnesota

Located in what was, and remains, a community recreation center, City Academy has achieved national recognition. City Academy is a classic example of the value of a school sharing space with another organization—in this case a recreation center with excellent facilities. City Academy has achieved an enviable record of serving students with challenging backgrounds. It also is the nation's first charter public school. Both U.S. Secretary of Education Richard Riley and President Bill Clinton came to City Academy to praise its program, students, and educators.

Key educational features. The program is based on competencies—all students must demonstrate certain skills and knowledge in order to graduate. It is heavily individualized and allows students to move at their own pace. It also offers rewards and connections. Students who work hard have the opportunity to obtain internships and apprenticeships with various construction trades. Thus, students learn important career skills as they improve their basic academic skills in math and reading.



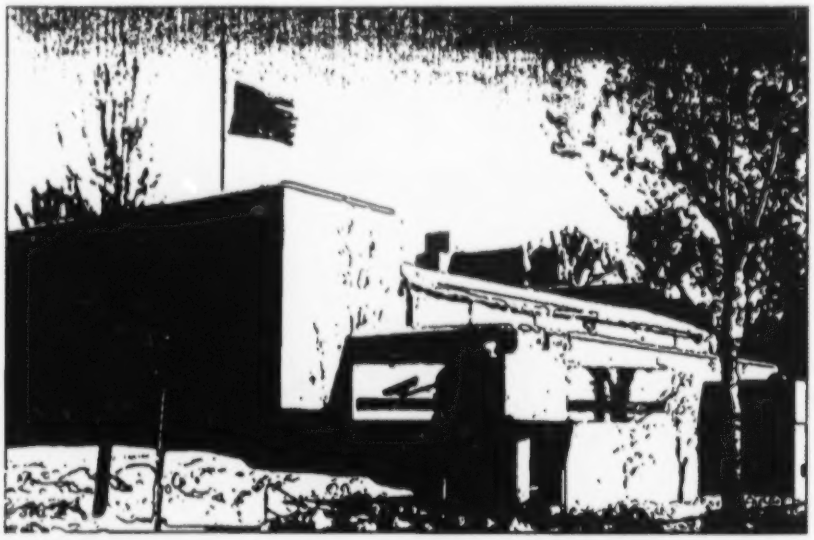
Key architectural features. For many years, the city of St. Paul has constructed and operated recreation centers in various neighborhoods around the city. Typically these facilities include a field house with a basketball court, craft studios or classrooms, and a large field with space for football in the fall and hockey in the winter. Young people generally use these recreation centers after school, in the evenings, on weekends, and during vacations.

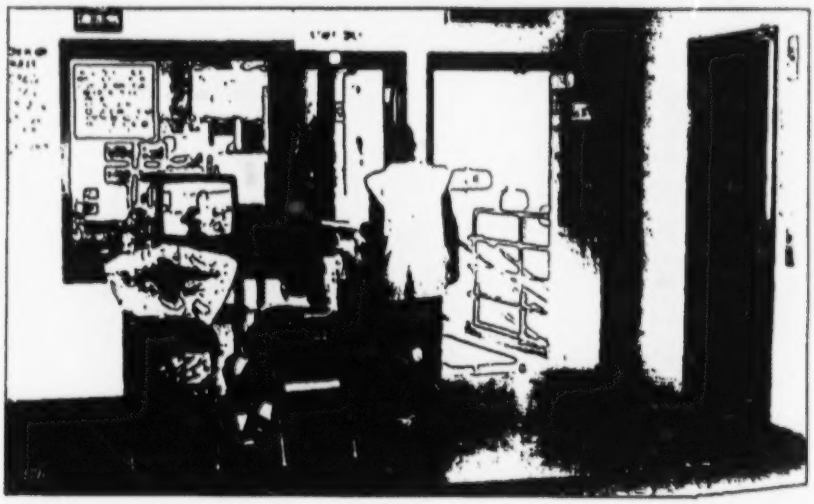
The WPA constructed a recreation center and located it in a low-income area on the city's East Side in 1940. In 1992, the city permitted several educators to create a new public school for about 100 secondary school students in the center. The center's three-story facility and outside athletic field had not previously been used during school time. The founders proposed to use the facilities from Monday through Friday, during the morning and early afternoon (i.e., school time) and agreed to pay a modest amount of rent. The city agreed, figuring this was a win-win situation.

Impact on students. City Academy students are all either former drop outs or students who had been told to leave large traditional schools. In other words, these young people are not just "at risk," they have experienced significant problems in their lives. Nevertheless, the school has produced dramatic improvements in the students' skills, knowledge, attitude, and behaviors. For example, for every year the average student attends City Academy, her or his scores on standardized tests improve two years.

More than 90 percent of City Academy's graduates have continued their education beyond high school. Some graduates return to talk with current students, and one City Academy graduate joined the school's faculty.

For further information. Contact Director, City Academy, 958 Jessie St. Paul, Minn. 55101; (651) 298-4624. *www.cityacademy.org.*





36a, 37a, and 37b: City Academy, the nation's first charter school, shares facilities with a recreation center. Serving students with challenging backgrounds, City Academy has a highly individualized curriculum that rewards students who make progress in their apprenticeships.

Clark Montessori

CINCINNATI, OHIO

Maria Montessori's philosophy has inspired many parents and early childhood educators to start nursery and elementary schools based on her ideas. The Cincinnati Public Schools, however, has created one of the nation's first Montessori public middle schools and the nation's first public Montessori high school. Housed together, the two schools have achieved considerable success. About 300 students attend the junior high school and about 250 attend the high school.

KEY EDUCATIONAL FEATURES. Montessori philosophy is central to the schools' vision, philosophy, and the way learning and teaching occurs in the schools. The goal is for students to become happy, healthy, productive adults who contribute to society.

The key elements of the school's program are

- *Extensive use of the outdoors.* Twice a year the high school has a two-week-long inter-session that focuses on one subject. During inter-session trips students have visited Appalachia and historical sites of the civil rights movement in southeastern United States and lived with Hopi Indians in the Southwest. Each year the junior high school travels to Andros Island in the Bahamas to do research on marine biology. Students hold fundraisers and the school donates the equivalent of one teacher's salary. Depending on their family income, students pay a fee based on a sliding scale.
- *Extensive use of community experts and resources.* A local psychologist, for example, helped students research challenges teenagers face. The students were asked to present this research at a national conference in Chicago.
- *Community service.* Students must perform at least 200 hours of community service over their four years in high school with a minimum of 50 hours per year. This exercise teaches students to live in a community, to negotiate, and to identify where they fit in the world.
- *Libraries.* Students use public libraries instead of a school library.
- *Active, hands-on learning.* The junior high school has a steel drum band that has received a great deal of recognition, including playing at the New Orleans Jazz and Heritage Festival and many events in the Cincinnati metropolitan area. The band has produced a CD that it sells to raise money for field trips and other projects.
- *Major project.* Each senior chooses a major year-long project and presents it in May.
- *Extensive opportunity for students to assess their work.* While the teachers make the final decision, they help students look carefully, honestly, and critically at their own work.

About 50 percent of the students come from low-income families. The faculty describes the student body, which is approximately 50 percent African American and 50 percent white, as "very representative of Cincinnati." The complete range of academic skills is represented. Although any student may attend the schools, priority is given to previous Montessori students.

39a and 39b: Clark Montessori shows that well designed, hands-on projects help improve student achievement and develop a sense of pride among youngsters. The school's steel drum band is very popular and has produced a CD that it sells to raise money for field trips and other projects.

KEY ARCHITECTURAL FEATURES. The two schools share a large Cincinnati public school that had been closed because the district did not need the space. Areas have been set aside in the halls as places where students can sit and talk with each other. Although each student has a locker, most of the students don't use locks. Students report that theft is not a problem.

IMPACT ON STUDENTS. Student scores on standardized tests are well above the average in the Cincinnati and above national averages. Test scores are close to those produced at Cincinnati schools that use challenging written tests as part of their admissions process. The Montessori schools also see the ways in which students learn to live and work together as key indicators of success. The faculty regards the continuing success of the year-end eighth grade trip as a sign that they are doing well. During the 10-day trip, 50 students travel together, study marine biology, plan budgets, keep journals, and sketch.

FOR FURTHER INFORMATION. Contact Marta Donahoe, Team Leader, or Tom Rothwell, Principal, Clark Montessori, 3030 Erie Avenue, Cincinnati, Ohio 45208-2406; (513) 533-7380. *http://clark.cpsboe.k12.oh.us.*

Frederick Douglass Academy

Harlem, New York City

Frederick Douglas Academy is located on the northern end of Harlem in New York City. Approximately 90 percent of the students graduate within four years of entering, compared to a city-wide average of about 50 percent. Open to all students, Frederick Douglass Academy and its founding principal have been featured on "60 Minutes."

Key educational features. Frederick Douglass Academy enrolls 1,100 students in grades 6 through 12. Unlike some "exam high schools" in New York City, Douglass does not require students to score well on a test to enroll. The school is a monument to tough love—students wear uniforms and expectations are high. The school's goal is to "provide a rich, vigorous, and challenging academic curriculum that will enable our students to enter the college of their choice." The school is not just named for Frederick Douglass; it embodies his resolution. The school's motto—"With-out struggle, there is no progress"—which appears at its front entrance, comes from one of his speeches. Douglass's picture is featured throughout the building.

Beginning with the sixth grade, the school is committed to preparing its students for college. The college counseling office is open every day until 4:00 p.m. and from noon to 4:00 p.m. two Saturdays per month. The college counselor meets with seniors weekly to make sure they are following through with the college admissions process. The school's attitude, as explained by the college counselor, is "We know our children can succeed. We work with them and their families to make sure it happens."

Key architectural features. The Douglass school building was once an elementary school. It would win no awards for outside beauty. It is located on the northern end of Harlem, in a low-income area. But inside, the school shines. You don't see paper or other debris on the floor, anywhere.

Impact on students. The school's students have a much higher passing rate on state Regents Examinations than the average New York City public school. In June, 1999, Frederick Douglass had 114 graduates. Of those, 113 went on to college, including Princeton, Penn State, Cornell, Georgetown, Middlebury, Carnegie Mellon, and the University of Michigan. One student decided to enter the military. The students received more than $5 million in scholarship offers.

Douglass teachers acknowledge societal problems. But challenges are not excuses. They believe, and the school's record show, that hard work, creativity, encouragement, and expectations produce success.

For further information. Contact Dr. Gregory Hodge, Principal, Frederick Douglass Academy, 2581 Adam C. Powell, Jr. Blvd., New York, N.Y. 10039; (212) 491-4107; *www.fda.csd5.k12.ny.us*. Douglass also has been discussed in founding principal Lorraine Monroe's book, *Nothing's Impossible*. (New York: Public Affairs Books, 1997).

40a, 40b, 41a, and 41b: The spirit of hard work, high expectations, and persistence pervades Frederick Douglass Academy. Douglass' picture, bust, and quotations are found throughout the school. Students are taught to excel in traditional subjects like Latin as well as to develop entrepreneurial skills through mini-businesses they create.

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El Puente Academy for Peace and Justice

BROOKLYN, NEW YORK

El Puente Academy for Peace and Justice opened as a public school in 1993 in a very low-income, racially diverse section of Brooklyn. The school's building houses a variety of community development and service programs along with the school. The school serves 146 students in grades 9 through 12. Located in an area where the large high school (more than 2,000 students) had a graduation rate of less than 30 percent before it was shut down, El Puente's graduation rate is more than 90 percent.

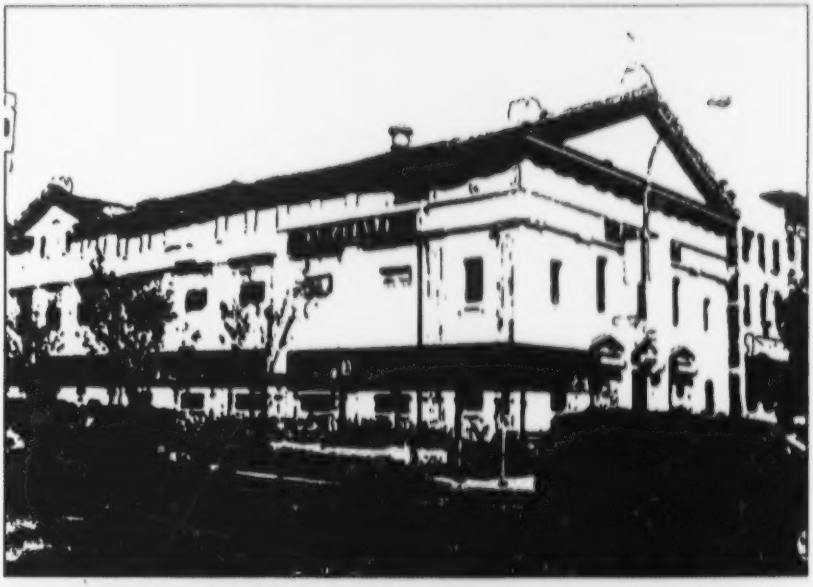
KEY EDUCATIONAL FEATURES. El Puente means "the bridge." Located near the Brooklyn Bridge, the school intends to bridge the gap between where students are and where they want to be. El Puente was founded as a "New Vision" school within the New York City Public Schools. It was created by a community organization that focuses on improving conditions in the Williamsburg and Bushwick communities, extremely low-income sections of North Brooklyn just across the Williamsburg Bridge from Manhattan.

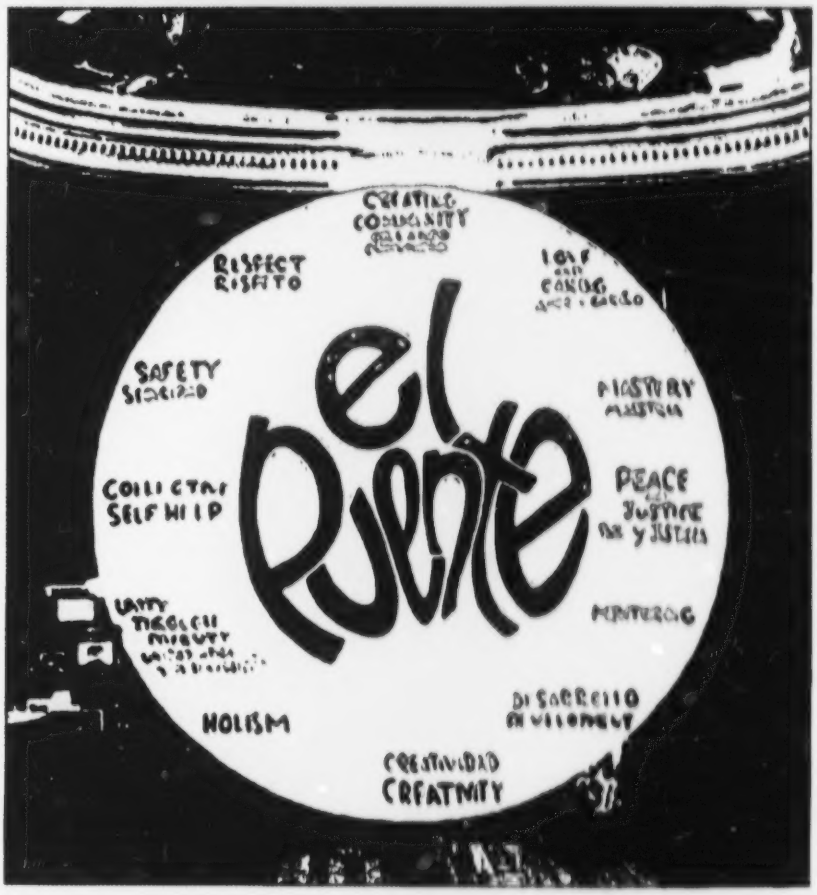
El Puente's program is designed to help students develop strong academic skills and the ability to help improve the world. The school has four guiding principles: creating community, love and caring, mastery, and peace and justice. Students take classes, participate in internships, and are involved in various forms of community action. For example, some of El Puente's students helped create a multiracial coalition that successfully convinced the city of New York to reconsider putting a large incinerator in their neighborhood. The incinerator would have had a negative impact on the air quality in the neighborhood, whose residents already suffer from diseases related to poverty and poor air quality.

Teachers combine class work with community research. For example, students studying biology tested the air quality in the school's neighborhood, while other students applied the principles of economics by comparing the quality and price of produce available in neighborhood stores to that of stores in more affluent neighborhoods.

Students use art—plays, murals, video and dance—to help illustrate what they are learning. El Puente students have worked closely with the Puerto Rican Education and Legal Defense Fund, the Hispanic Federation of New York City, and the Congress for Puerto Rican Rights on issues such as housing, education, employment, and relationships between police and community members.

KEY ARCHITECTURAL FEATURES. The school is located in an old church building, which has been restored to house the school as well as act as community headquarters. El Puente organizes its space to include not only the academy but also a health and wellness clinic, career and guidance services, and a program to help community residents learn to speak English. El Puente sees its mission as helping to solve community problems. The integration of educational, advocacy, health, arts, and guidance services is part of El Puente's strategy to serve its students and families.





IMPACT ON STUDENTS. Graduation rates at El Puente average over 90 percent, well above New York City's average as well as the average of large neighborhood high schools. In addition, student achievement on statewide Regents Examinations is at the top of achievement standards for all schools. El Puente faculty are pleased and gratified by the academic gains their students have made, but they are equally gratified with the changes of attitude and behavior of many students. Young people have learned to use their energy and talent to help create better lives for themselves, their families, and the broader community.

FOR FURTHER INFORMATION. Contact Principal, El Puente Academy for Peace and Justice, 211 S. 4th Street, Brooklyn, N.Y. 11211; (718) 599-2895.

42a, 43a, and 43b: Housed in an abandoned church building, El Puente Academy shares space with several community groups. The building is a headquarters for learning and community economic development.

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Julia Richman Education Center

NEW YORK, NEW YORK

People come from all over the world to see what educators have done to the rejuvenated Julia Richman school building in New York City. Opened in 1923, the building hosted a school for young women who were being trained in clerical work. Then it was turned into a large comprehensive school for more than 2,000 students. By the mid-1990s, attendance and graduation rates were so low the New York City Board of Education adopted a plan, proposed by the Coalition of Essential Schools, to close the large failing high school and create six small schools of choice. Today six autonomous schools share the Julia Richman Education Complex (JREC) space. The school's faculty has been invited to visit the White House to honor its efforts.

KEY EDUCATIONAL FEATURES. The schools include:

- *Ella Baker Elementary School,* which provides a rigorous academic program for pre-kindergarten through eighth grades;
- *P226M Junior High,* which serves autistic junior high school students by emphasizing learning through arts and technology;
- *Manhattan International High School* for students who have lived in the United States less than four years;
- *Talent Unlimited High School,* which focuses on the performing arts;
- *Urban Academy,* which emphasizes inquiry-based learning and uses seminars, fielded trips, internships, and university courses to prepare students for the future; and
- *Vanguard High School,* which helps students become intellectually powerful, creative, and resourceful members of society.

Three of the four high schools use a system of performance assessment to grade students, which contributes to their students' academic success.

KEY ARCHITECTURAL FEATURES. Each school has its own space in the building and shares some common areas, such as the library and auditorium. In addition to the schools, several services share space in the building. These include the Mt. Sinai Student Health Center, the Teen Parent Resource

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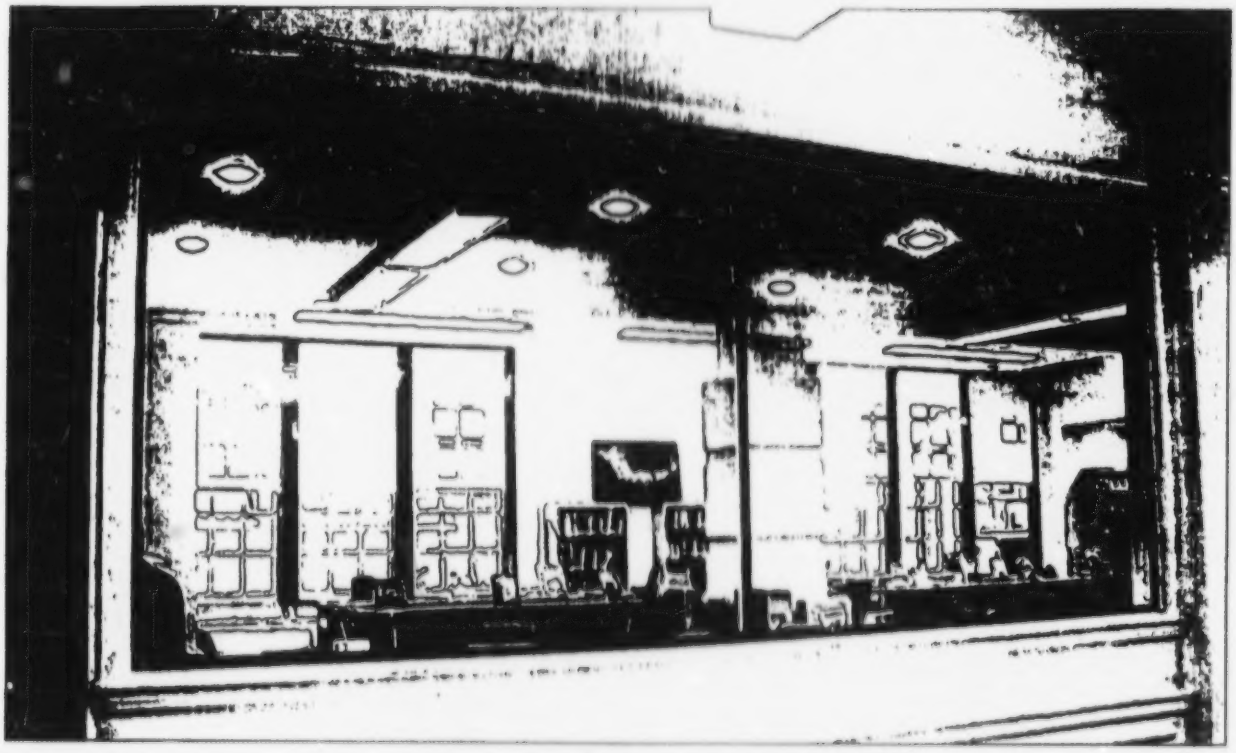


Center, and the Center for Inquiry in Teaching and Learning. The building also houses First Steps, an infant toddler program serving the children of high school students attending school in the building. The facility includes an observation room that is used for child development classes for students and daycare center workers from throughout New York City.

IMPACT ON STUDENTS. Graduation rates at the high schools are significantly better than the citywide average. Students at the schools have achieved considerable success in the world of work. The U.S. Department of Education has named Urban Academy a "New American High School," meaning the school is regarded as a national model. The Bill and Melinda Gates Foundation has awarded Urban Academy a grant to help further develop

and share information about its program of assessing student performance.

FOR FURTHER INFORMATION. Contact Ann Cook, Julia Richman Complex, 317 E. 67th Street, New York, N.Y. 10021; (212) 570-5284.

44a, 45a, and 45b: A large, formerly failing school has been replaced with six small, successful schools, a health clinic and a day care center. Each school has its own space within the building. Some areas, such as the library and auditorium, are common spaces used at various times by all the schools.

Mesa Arts Academy

MESA, ARIZONA

Educators and a Boys and Girls Club of the East Valley in a low-income area of Mesa, Arizona, have created a unique partnership—a charter public school serving about 180 students in grades K through 8 on the campus of the Boys and Girls Club. Working together, they've created a school that ranks among Arizona's best at improving student achievement.

KEY EDUCATIONAL FEATURES. Mesa Arts Academy draws its racially diverse student body from the Mesa area, with more than half of its students coming from low-income, limited-English-speaking families who live near the school. Several gangs operate in the school's neighborhood and the school has worked with local community organizations to reduce their impact.

The Arts Academy faculty believes that active learning—enhanced by dance, drama, music, and visual arts—combined with focused instruction in academics will produce excellent results. The school's handbook explains, "Classes in the arts and multi-media are the heart of our Arts Academy. We believe all children are gifted and should be provided the opportunity to explore their talents in a safe environment that encourages personal growth."

Student test scores support these beliefs—the state ranks the school at the very top in terms of improving student achievement. Mesa Arts Academy employs a diverse faculty to teach its children. The faculty, which includes certified teachers, art specialists (including professional artists) and senior citizens who bring expertise in music, dance, painting and other fields, works along with the staff of the Boys and Girls Club.

Students are asked to participate in various community service activities. This includes older students tutoring younger students to build stronger skills and a greater sense of community.

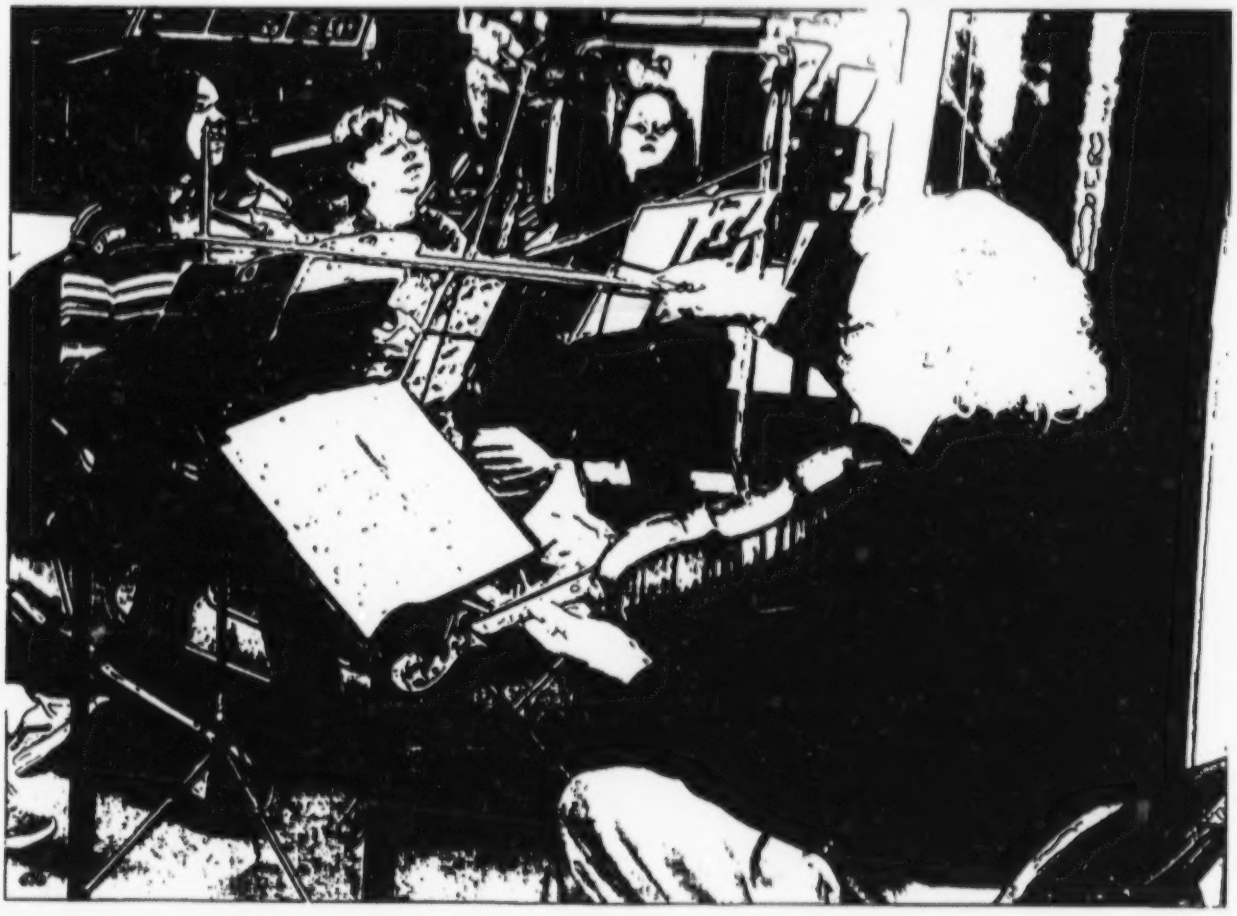
KEY ARCHITECTURAL FEATURES. Mesa Arts Academy students use the Boys and Girls Club's classrooms and facilities, which include two gyms, computer lab, art room, pre-school, and meeting rooms. The school also has erected several buildings behind the Mesa Boys and Girls Club to provide additional classroom space.

IMPACT ON STUDENTS. In 2000, Mesa Arts Academy scored first in the state for increasing seventh grade scores, fourth for increasing fourth grade scores, eighth for increasing fifth grade scores, and thirtieth for increasing eighth grade scores. Overall, test scores have increased over 30 percent in the last three years. In reading, the academy was first in the state for increasing fifth grade scores, and the fourth and sixth grade scores were in the top 25 percent. Using the Stanford 9 standardized test for the last three years, all four grades tested showed an increase in total scores when ranked against students nationwide. They also

showed an increase in total scores for grade equivalents. Of the students who attended the academy for three years and tested all three years, 79 percent showed increases on standardized tests in at least three of four key areas. This includes students with special needs whose scores often are excluded from overall school reports.

FOR FURTHER INFORMATION. Contact Sue Douglas, Director, Mesa Arts Academy, 221 W. 6th Avenue, Mesa, Ariz. 85210; (480) 844-3965. *www.clubzona.com/maa/*.

46a and 47a: Young artists at work with their teachers. 48b: Mesa's main entrance.



Minnesota New Country School

HENDERSON, MINNESOTA

The Bill and Melinda Gates Foundation recently gave Minnesota New Country School (MNCS) more than $4 million to help other communities replicate the school. It's one more sign of confidence in a unique school that is attracting national attention.

KEY EDUCATIONAL FEATURES. Located approximately 60 miles southwest of Minneapolis, the Minnesota New Country School serves about 120 students (grades 7–12) from rural communities. Teachers have organized themselves as a worker's coop under Minnesota's Charter School Legislation; the people who work there, literally, own MNCS.

Although Minnesota New Country students must demonstrate various skills and knowledge in order to graduate, the school's program is totally individualized. The school year starts in August with a family-student-advisor conference to plan the student's program. Students are expected to make public presentations three times a year, describing some of the things they are learning.

The school has no required courses, no grades, and no bells. MNCS has approximately one computer for each student. Each student has a workspace, which includes a desk, a computer, and a personal storage space that can be decorated with personal items, such as pictures of the students' friends and family. Students' programs consist of independent and small group study, internships, and apprenticeships. Some of the students have become so sophisticated with computers that local or area businesses have hired them to develop and maintain the businesses' websites.

The head of the Gates Foundation's Education Program has called Minnesota New Country School "one of the most exciting high schools in the country" because it skillfully uses so much of the emerging research about school size, thoughtfully uses technology, and has appropriate programs for secondary students.

KEY ARCHITECTURAL FEATURES. Minnesota New Country School opened in 1994. For the first four years, the school operated from three storefronts on Main Street in LeSueur, Minnesota (known to some as "the Valley of the Jolly Green Giant"). In 1998, the school moved several miles to its new home in Henderson.

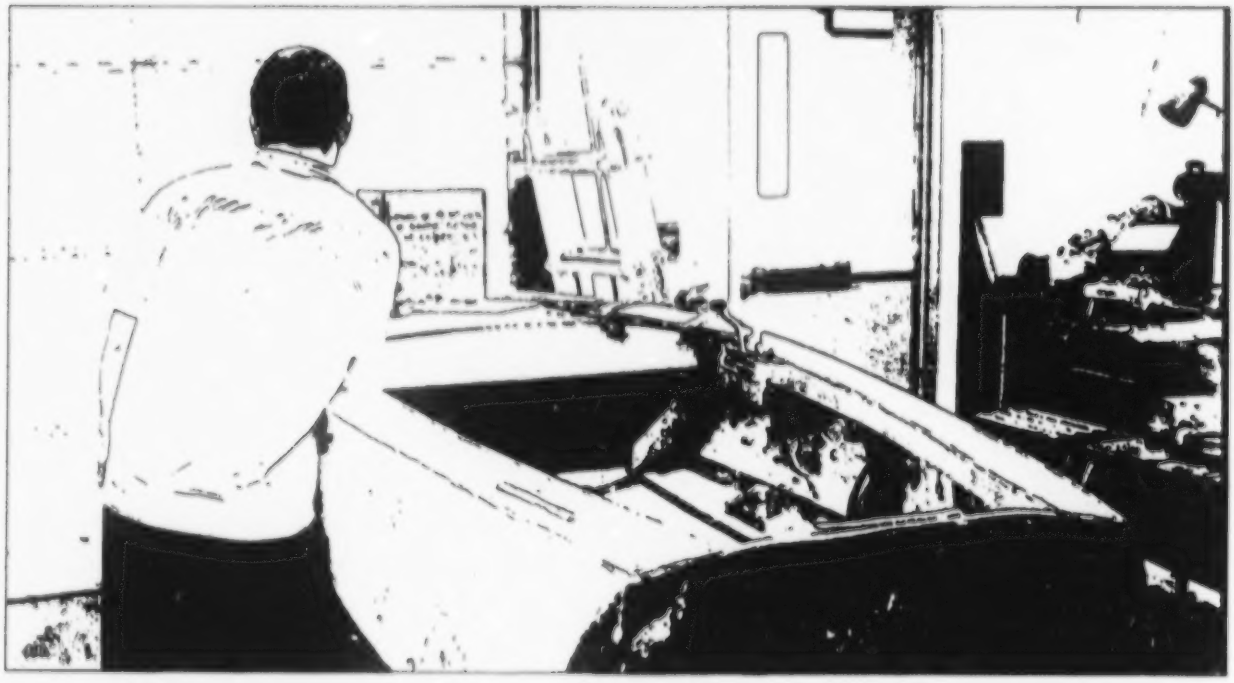
The new home was designed by MNCS faculty, parents, and students.

It is primarily a large, open space with several rooms along the sides to house small groups of people who need a quiet space for meeting. In the center of the large open main room is a stage, behind which stands a large silo. The silo represents the architectural heritage common to many of the school's students.

IMPACT ON STUDENTS. MNCS students have shown consistent improvement on standardized tests required by the state of Minnesota. These include reading, writing, and math tests that students must take to graduate from high school. MNCS students score above the state averages in their performances on these tests. The school has also developed ways to measure writing and public speaking skills—MNCS students have shown improvement in these areas, too.

FOR FURTHER INFORMATION. Contact Minnesota New Country School, P. O. Box 488, Henderson, Minn. 56044; (507) 248-3353. *www.mncs.k12.mn.us.*

48a, 49a, and 49b: Each MNCS student has a desk and a computer as well as the opportunity to participate in a variety of hands-on projects. Students make presentations three times a year to share what they have learned.



Northfield Community Resource Center

NORTHFIELD, MINNESOTA

"It's a dream come true." That's how the Northfield's Senior Citizens Center director describes the Northfield Community Resource Center. Opened in fall 2000, the building represents a cooperative effort among five major groups, including the local school district, to create a $5.5 million building that provides services and opportunities for everyone from infants to senior citizens. By working together, the five groups achieved far more than any of them could have achieved singly.

KEY EDUCATIONAL FEATURES. Discussions about a new home for Northfield Senior Citizens started about 14 years ago. Over the last several years, a variety of groups joined the seniors to plan the center. The five major partners in the center are

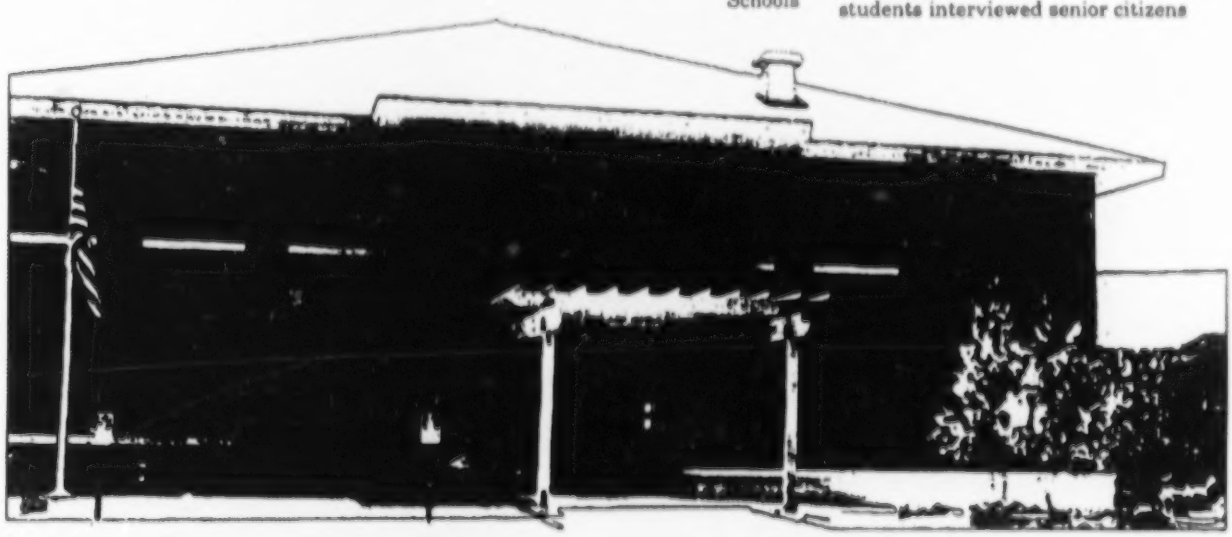
- *the City of Northfield,* which is the managing partner;
- *Northfield Public Schools,* which operates an Alternative Learning Center
- *Northfield Senior Citizens, Inc.,* which operates a vast array of services
- *Three Rivers Community Action Center,* which operates a Head Start center and a child care service for children ranging in age from six months to five years; and
- *Northfield Community Action Center,* which operates a Clothes Closet, Food Shelf and family counseling programs

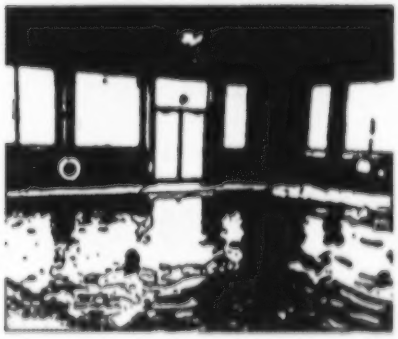
The executive director of Three Rivers Community Action notes, "Of all the public private partnerships I've been involved in, this has been the most fun." He pointed out that the planning group overcame many obstacles, including some residents who wondered if folks of different ages could get along in the same building. Now that the building is open, the resounding answer appears to be "Yes!" The executive director of the Minnesota Association of School Administrators, who was Northfield Superintendent of Schools while the Center was developed, says, "This process of working together, deciding our organizations could help each other, is almost as important as the final product. Everyone gains when people work together like this."

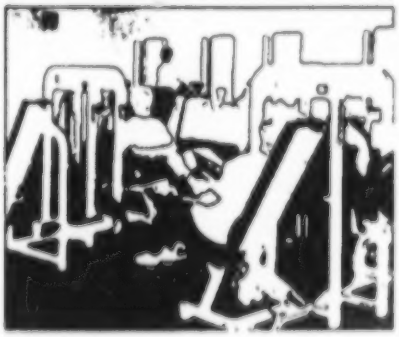
A famous sign just outside of town used to read "Welcome to Northfield: Home of Cows, Colleges and Contentment." It's time to add another C to that sign—cooperation. Northfield shows us how it can be done.

KEY ARCHITECTURAL FEATURES. The two-story building has four wings and covers more than 58,000 square feet. The center is housed in about five acres. It has 84 rooms, including a swimming pool, exercise room, cafeteria and eight conference/meeting rooms.

IMPACT ON STUDENTS. The Area Learning Center works with approximately 110 students, ages 16 to 21. Because the building has just opened it is not possible to measure the impact on students via traditional means, such as test scores, graduation or attendance rates. It is clear, however, that collaboration has opened up important new opportunities for students. As part of a local history project, for example, ALC students interviewed senior citizens







50a, 51a, 51b,and 51c: Five major organizations, including Northfield's city government and school district, joined forces to create a state-of-the-art facility serving the entire community. Sharing space allows students to learn from, as well as to help, senior citizens and infants.

who come into the building. Some ALC students also assist in the Head Start program, another building tenant.

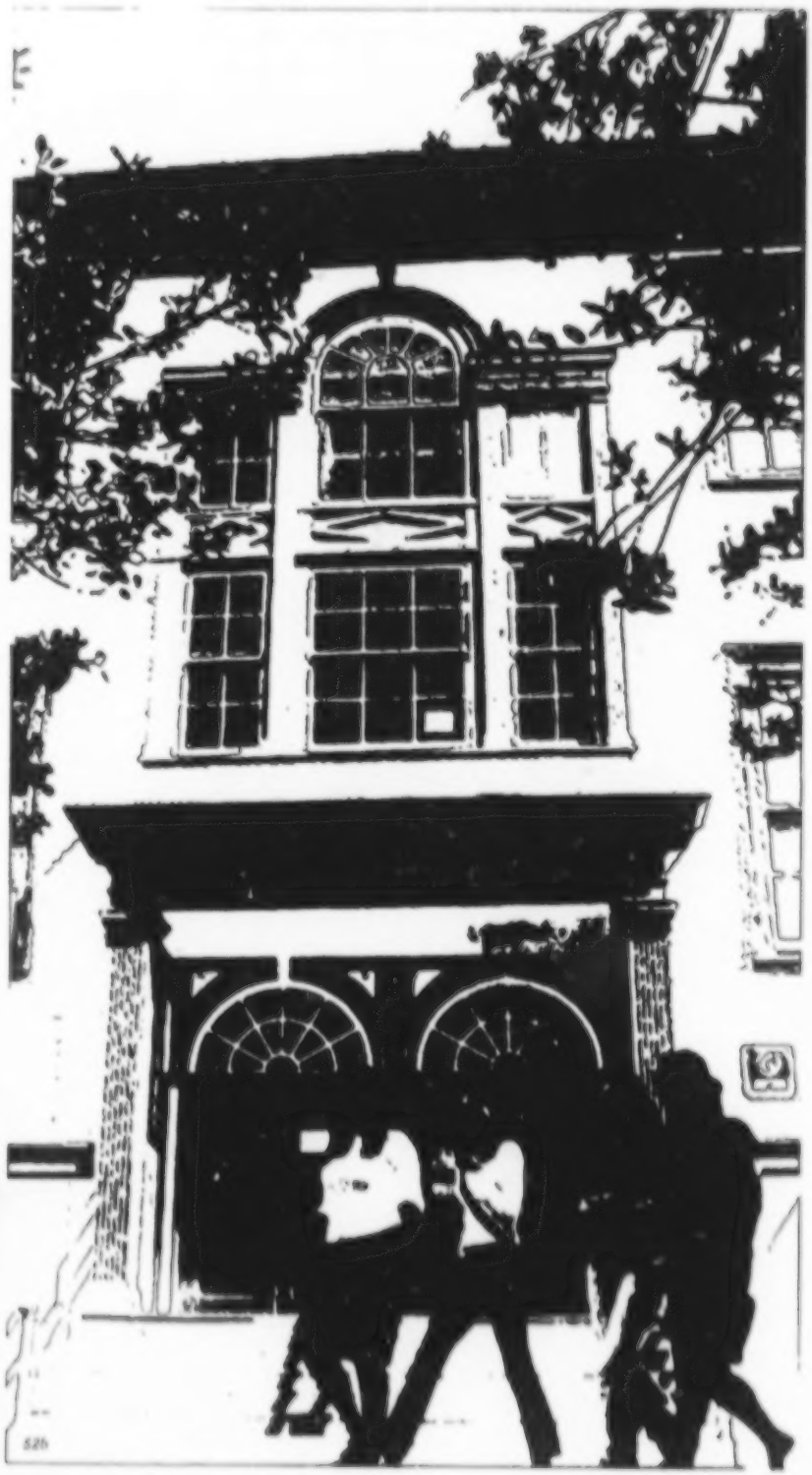
FOR FURTHER INFORMATION, Contact Northfield Community Resource Center, 1651 Jefferson Parkway, Northfield, Minn. 55057. (507) 664-3500.

The Nova Project

SEATTLE, WASHINGTON

Seattle's Nova Project shows what can be done with an 85-year-old school building. For almost 30 years, the school has been taking young people from challenging backgrounds and producing excellent results. Although many of Nova's 250 students in grades 9 through 12 come from challenging backgrounds, their academic accomplishments rank above Seattle high school averages on many levels.

KEY EDUCATIONAL FEATURES. Nova is small—250 students. Each student has an advisor who gets to know the youngster well. Nova faculty believes that one of its responsibilities is to prepare students to be thoughtful, active citizens. Internships and community service projects help accomplish this goal. Many students arrange internships with attorneys, midwives, glassblowers, snowboard designers, Seattle Opera managers, and theater stage designers. They can earn credits toward graduation with internships or by taking courses at Nova or at other high schools, dance studios, and other community resources.



Most of Nova's curriculum is multidisciplinary and project oriented. Nova offers world languages, all levels of mathematics and science, environmental and outdoor education, desktop publishing, computer graphics and multimedia workshops as well as communication arts (literature, writing, and poetry). Class sizes range from five to thirty students (small classes are possible because of the internships and the courses students take at other locations). Students work with teachers to create independent study programs and go on hiking/camping trips to places like Mt. Rainier.

From the school's inception, staff and students have shared decision-making. Students and teachers are on committees that make critical decisions about how the school operates—how the budget is spent, who is hired, and how teachers are evaluated.

The school uses four Cs to summarize its key strategies: contracts, committees, coordinators, and community. The school's uses represent a wide diversity of young people, many of whom are "on their own" or living in foster families. Traditional schools were not successful for many of them.

KEY ARCHITECTURAL FEATURES. Housed in an elementary school built in the early 1900s, Nova is a colorful, comfortable place. Many of the high-ceilinged classrooms and wide halls, typical of schools built in the early 1900s, feature beautiful murals Nova students have drawn over the school's 30-year history. Students have created a garden and greenhouse on grounds just outside the school building.

IMPACT ON STUDENTS. Nova students place well above Seattle averages on a variety of measures, including citywide writing assessments, standardized tests, percentages entering a four-year college, and surveys about school safety, learning climate, and student-staff relations.

The University of Washington provides another way to measure the high school's quality. The university's admissions office compares a student's university grade point average with the grades they earned in high school. Nova High School students consistently rank among the state's top 10 in consistency between high school and college grades, which the university attributes to the high school's rigor and challenge.

FOR FURTHER INFORMATION. Contact Elaine Packard, Principal, Nova High School, 2410 E. Cherry, Seattle, Wash. 98122; call (206) 726-6730.

53a, 53b, 53a, 53b, and 53c: Nova Project students use their 55-year-old building as a headquarters, taking courses and participating in internships throughout the city. The building has many comfortable chairs and displays murals the students have drawn.

Parham School

CINCINNATI, OHIO

The floors at Parham's Elementary School gleam—reflecting the high standards, strong expectations, and dramatic progress of an inner city school in Cincinnati. Having revised its curriculum and developed a close, effective working relationship with FamiliesFORWARD, a community agency, Parham has become, in the words of the U.S. Secretary of Education, "a model for the entire nation—a place from which all of us can, and should, learn."

KEY EDUCATIONAL FEATURES. Parham houses grades pre-K through 8 and serves about 425 students. Ninety-eight percent of its students are African American and 89 percent come from low-income families. Several years ago the school had the lowest test scores and among the worst attendance of any Cincinnati public school. In the last several years, however, Parham has gone from a school that the district targeted for intensive remediation to a school that the district praises for the dramatic improvements in student achievement it has produced.

Walking around the school, one sees pride expressed everywhere—from the kindergarten, where five-year-olds proudly demonstrate their ability to count by twos, threes, and fives, to a seventh-grade class where youngsters recite key parts of vital documents in American history.

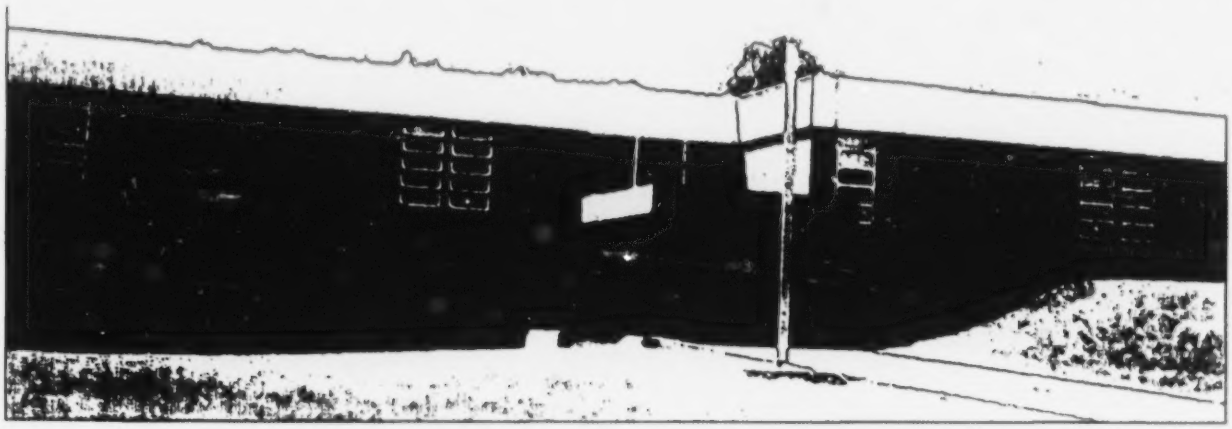
The school provides space to FamiliesFORWARD, a more than 125-year-old social service agency. FamiliesFORWARD provides several staff who work with families and students on many issues. It offers an extensive after school program for students in areas such as ballet, African dance, violin, homework clubs, test taking clubs, social skills, choir, and black history. FamiliesFORWARD also provides staff who work with students during the school day, in collaboration with the school's faculty. After parents identify priorities, FamiliesFORWARD provides classes and counseling on these topics. Classes take place at the school and in homes.

District administrators praise the school's faculty, principal, families, and FamiliesFORWARD. They agree that the collaboration is a model for the city, state, and nation. FamiliesFORWARD has started working with other Cincinnati public schools, which are also recording improved student achievement and attendance.

KEY ARCHITECTURAL FEATURES. Parham was built in 1970. The two-story brick structure has the traditional features of buildings from that era—hallways with classrooms on each side.

IMPACT ON STUDENTS. A few examples help illustrate the progress Parham students have made in the last few years. On Ohio's fourth grade writing test, the percentage of students passing more than doubled in writing, reading, mathematics, and science. On Ohio's sixth grade tests, the percentage of students passing the reading, math, science, and citizenship tests also more than doubled. The percentage of students passing the sixth grade citizenship test went from 22 to 84 percent.

FOR FURTHER INFORMATION. Contact Sharon Johnson, Principal, Parham, 1834 Fairfax Avenue, Cincinnati, Ohio 45207; (513) 872-7320. For information regarding FamiliesFORWARD, contact Betti J. Hinton, President, FamiliesFORWARD, 2400 Reading Road, Cincinnati, Ohio 45202; (513) 721-7044.



54a, 54a, 54b, 54c, and 54d: Parham Elementary faculty worked closely with FamiliesFORWARD, a local social service agency they share space with. Their collaboration has helped produce dramatic gains in student achievement and attendance. The building's gleaming interior reflects high expectations and intense school pride.

55

Perspectives Charter School

CHICAGO, ILLINOIS

Located just south of Chicago's downtown business area, Perspectives Charter School is one of the city's most effective public high schools, open to all kinds of students. The school serves 150 students, grades 6 through 12. Co-founded by veteran Chicago teachers, the school uses its small size, high expectations, and extensive community involvement to produce excellent results.

KEY EDUCATIONAL FEATURES. More than 70 percent of the students are from low-income families. The school begins each fall with individual conferences to set individual student goals and help the school's faculty learn more about the students and their families. The five guiding principles are

- a disciplined life,
- celebrating differences,
- parent involvement,
- relevant and rigorous curriculum,
- and field studies and community engagement.

Perspectives helps students make connections between the classroom and community. Students constantly read about people who have made a difference in the world and learn how they can do the same. In addition to classes, students are expected to participate in internships, apprenticeships, and community service projects that involve work with the dozens of nearby Chicago business, community, and advocacy groups. Each year the faculty goes on a two-day retreat and is paid to work the entire month of August.

KEY ARCHITECTURAL FEATURES. Perspectives used a former furniture warehouse located five minutes south of the Loop, Chicago's famed downtown area. The building already had a mixture of large and small rooms, so remodeling needs were not great. Moreover, the location gives Perspectives students ready access to the extraordinary range of internship and apprenticeship opportunities available in a downtown area like Chicago's.

IMPACT ON STUDENTS. In the spring of 2000, 83 percent of the students who entered the school four years earlier graduated (compared to a city-wide average of about 50 percent). Over the last three years, the percentage of students reading on grade level has doubled (from 17 to 36 percent), and the percentage doing math at grade level tripled (from 11 to 35 percent). The school has developed other forms of assessment that show students are mastering the ability to work with others in a group, analyze problems, consider possible ways to deal with the problems, and select a solution.

FOR FURTHER INFORMATION. Contact Perspectives Charter School, 1532 S. Michigan Avenue, Chicago, Ill. 60605; (312) 431-8770. *www.perspectivescs.org.*

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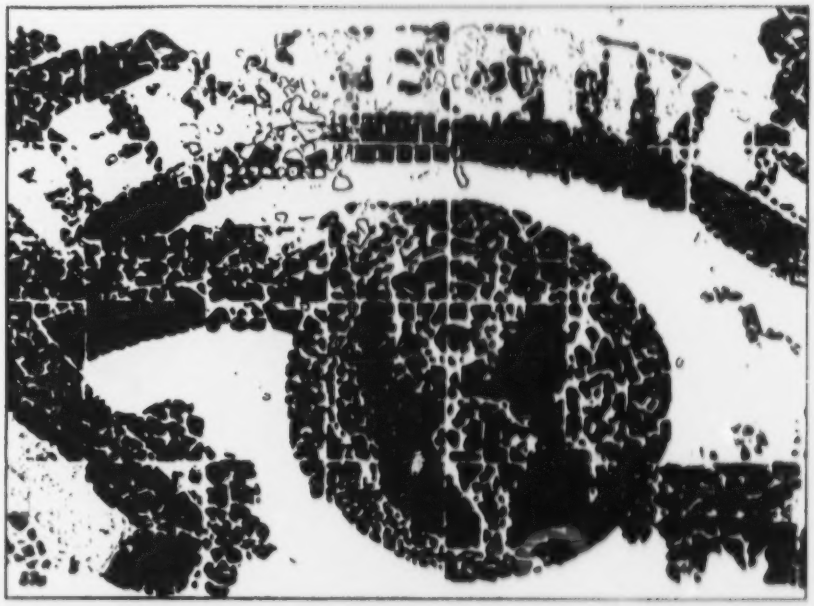
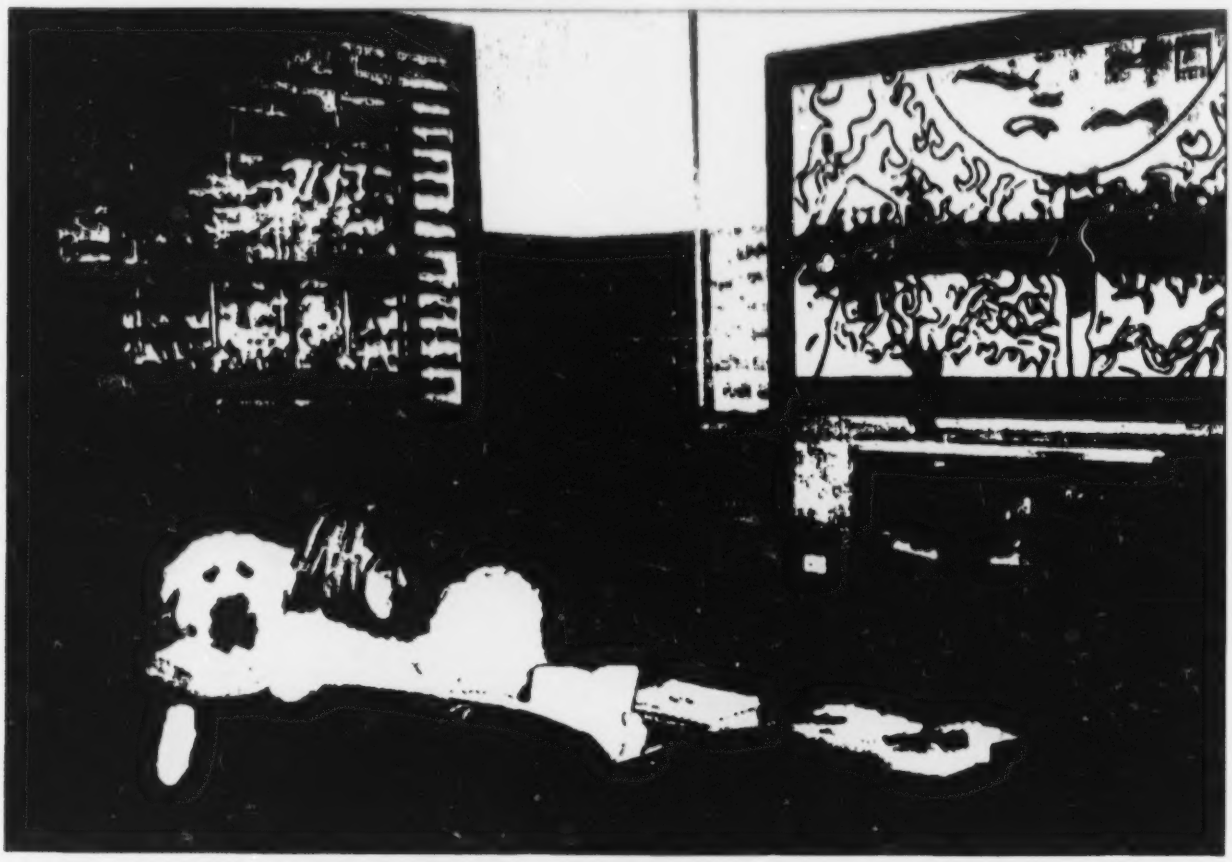


56a, 57a, and 57b: Perspectives' small size, high expectations, and individualized program produce excellent results. Student work is featured throughout the building. Located near "the Loop," Chicago's famed downtown area, Perspectives students are able to combine classroom work with community exploration projects, internships, and mentorships.



School of Environmental Studies

APPLE VALLEY, MINNESOTA

The School of Environmental Studies, a public school of choice, serves about 400 high school students. It is located on the grounds of the Minnesota Zoo in Apple Valley, a Minneapolis-St. Paul suburb. Opened in 1995, the school has been named a "New American High School" by the U.S. Department of Education because of its innovative programs and its success.

KEY EDUCATIONAL FEATURES. The "Zoo School" enrolls approximately 400 juniors and seniors. The school is open to all kinds of students and enrolls a cross section of the suburban district. It is a school of choice. The vast majority of its students say they select the school because they want to attend a small, more individualized school, not because they plan a career in environmental science. The number one reason students attend the school is because they are "looking for a sense of community, and a feeling of connectedness with other students."

Students take part in an array of interdisciplinary courses and many participate in internships and apprenticeships as well as community service. Many take trips around the country to study environmental issues "on site."

Sharing space with the zoo offers students opportunities to research animals, help plan exhibits, and learn from zoo officials. The zoo also has loaned the school many artifacts from its collection.

Students each have a personal workspace, including a chair and desk, which they can decorate with pictures of friends and often reflects their hobbies and interests. Student work is assessed by community professionals, including businesspeople, scientists and politicians, as well as teachers. Students often place material they've created on the Web as part of learning to share information with others.

KEY ARCHITECTURAL FEATURES. The building was constructed for the district on the campus of the Minnesota Zoo. The architect used the same per student cost figures as the district had used for its other sites. This means that building construction costs are the same per pupil as in other much larger high schools in the district. The school has a combination of large and small spaces that are designed to be flexible so they can be used as the school needs.

IMPACT ON STUDENTS. A high percentage of the students attend college, have good test scores, and create few discipline problems. The "Zoo School" students' records compare well with those of students who graduate from other schools in the district.

FOR FURTHER INFORMATION. Contact Dan Bodette, Principal, Minnesota School of Environmental Studies, 12155 Johnny Cake Road, Apple Valley, Minn. 55124; (952) 431-8750. *www.isd196.k12.mn.us/schools/ses.*

58a, 58b, and 58c: Located on the campus of Minnesota's state zoo, the School for Environmental Science provides many opportunities for students to develop strong academic skills and an in-depth understanding of zoo animals.

South Grand Prairie High School

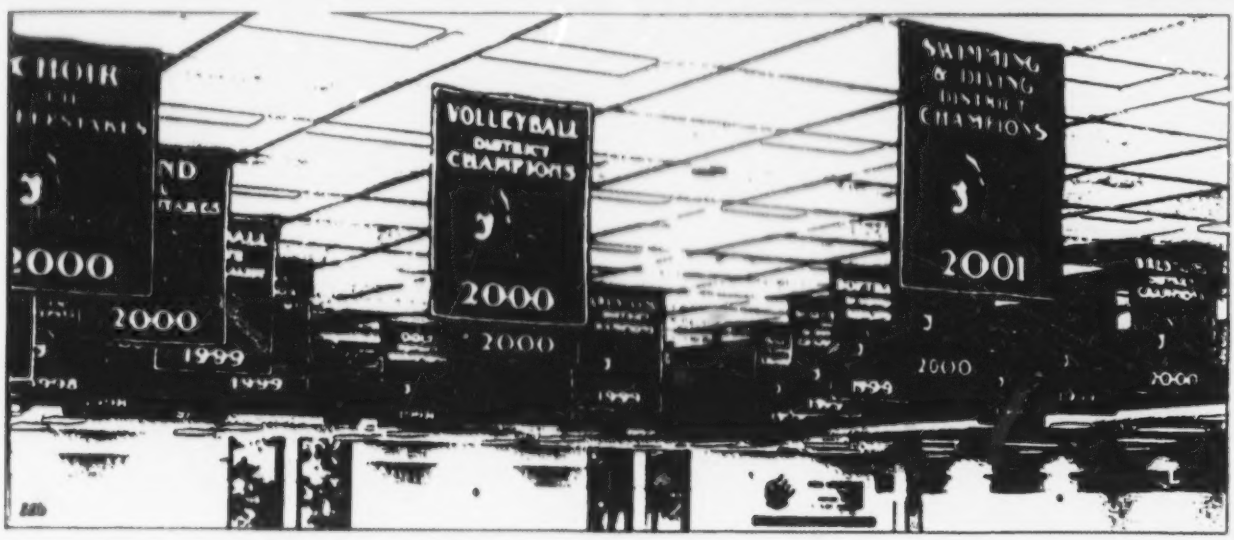
GRAND PRAIRIE, TEXAS

South Grand Prairie is a suburban high school located in a community between Dallas and Ft. Worth, Texas. The school has five academies that serve approximately 2,500 students. The student body is 46 percent white, 19 percent African American, 27 percent Hispanic, 7 percent Asian, and 1 percent American Indian. Fourteen percent are economically disadvantaged and 30 percent are at risk. The attendance rate is 95 percent and the drop out rate is less than 2 percent.

KEY EDUCATIONAL FEATURES. In 1996, South Grand Prairie began a massive restructuring program that focused on turning a traditional high school into five academies. Teachers integrate career information into their lessons.

Strategies for success include eliminating low level or general courses, raising standards for all students, and adding several new high-level academy electives and advanced placement courses. The school operates on a 36-week school year, divided into three 12-week terms. This allows students to take five classes that meet for 72 minutes each. The South Grand Prairie High School concept provides students with a sense of belonging and the opportunity to explore their interests and aptitudes while receiving a solid foundation in the academics. The goals of the academies are to open a student's mind to the relevancy of

58a, 58b, 59a, and 59b: Already well above average, this suburban Texas high school made considerable progress after converting from one large school to five small schools within a large building. Students come together to participate in extracurricular activities whose successes are celebrated by colorful banners.



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academic courses and to demonstrate how high standards relate to career success. In addition to the essential academic elements, students learn about careers that are best suited to their talents and aptitudes.

The five academies within South Grand Prairie High School are

- *Business & Computer Technology,* which includes courses for students who are interested in the fields of computer programming, computer science, marketing, accounting, business management, office administration, and entrepreneurship.
- *Communications, Humanities & Law,* which includes courses for students who are interested in working with multicultural groups, law enforcement, education, politics, journalism, and public service.
- *Creative & Performing Arts,* which includes courses for students who are interested in the creative production of ideas and development of student talents.
- *Health Science & Human Services,* which includes courses for students who are interested in a career that provides a service to others.
- *Math, Science & Engineering,* which includes courses for students who are interested in a career that involves problem solving, investigation, and technical design.

Every freshman participates in the Keystone program to understand the culture and expectations of the school and how to be successful in high school. The optional Capstone program helps seniors develop a portfolio of their work from their high school experience.

KEY ARCHITECTURAL FEATURES. The building is a large three-story structure that is approximately 30 years old. The five academies each occupy a section of the building. As you enter the school, the cafeteria is on the left, decorated with 30 to 40 banners that proudly display the school's academic and athletics accomplishments. Student work is displayed prominently throughout the academies. Adjacent to the main building is a former vocational building that is now part of the school and is no longer a vocational campus. Some vocational courses are still taught through one of the academies. In part of the former vocational building, faculty and students have created an art museum to display student work and hold meetings.

IMPACT ON STUDENTS. South Grand Prairie High School has reduced the drop out rate and increased graduation rates since the redesign was begun. Eight Advanced Placement classes have been added since restructuring, bringing the total number offered to 23. The number of students taking Advanced Placement exams rose from 34 to 230.

FOR FURTHER INFORMATION. Contact Roy Garcia, Principal, Grand Prairie High School, 301 W. Warrior Trail, Grand Prairie, Tex. 75052; (972) 343-1500. *http://www.gpisd.org/gpisd/schools/highschool/sgphs/default.htm.*

Vaughn Next Century Learning Center

LOS ANGELES, CALIFORNIA

Vaughn garners the kind of dramatic improvements Americans hope their schools can achieve. In a Los Angeles neighborhood known for its high poverty, crime and violence, educators, families and community groups worked together to produce major improvements in students' knowledge, skills, and behavior. The school has been named a California Distinguished School and has been awarded a National Blue Ribbon from the U.S. Department of Education.

KEY EDUCATIONAL FEATURES. Vaughn serves more than 1,300 students (infants to grade 5), 98 percent of whom are from low-income families and about 80 percent from families where English is not spoken at home. More than 90 percent of the students are Hispanic and more than 60 percent of the faculty is Hispanic. The school converted to charter status in 1993. It uses the budget, personnel, and program flexibility that comes as part of its status as a charter school to extend the year and to pay teachers more than the typical Los Angeles school offers. The school also used its flexibility to reduce class size.

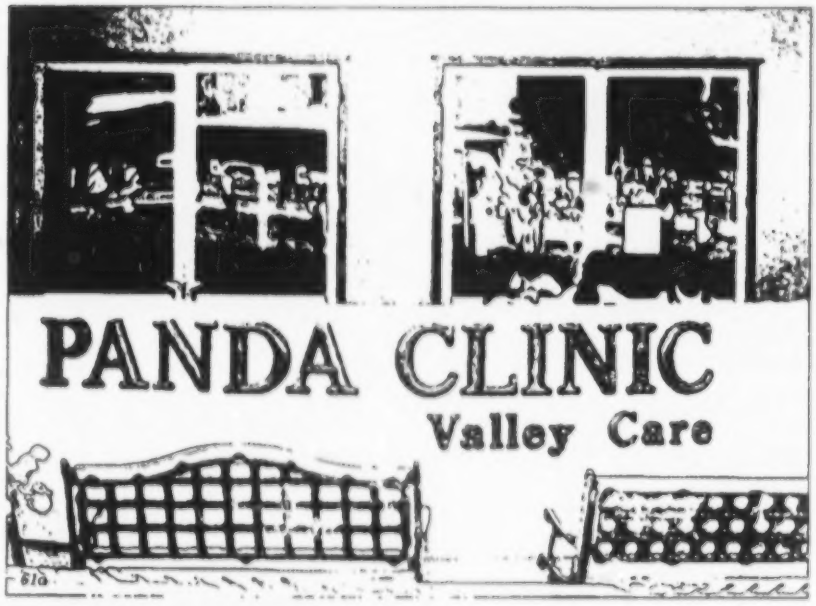
Vaughn employs several people who work directly with families to help them understand how they can help their children achieve. The staff also helps families resolve challenges the families encounter.

KEY ARCHITECTURAL FEATURES. Vaughn has the single story bungalow architecture common to southern California urban schools. After it converted to charter status, the school reached out

to a number of organizations and was able to add several new buildings to the campus. A new medical clinic, constructed and operated by the county health service, serves Vaughn students and their families. A new library and classroom building was constructed in collaboration with a local higher education institution that uses its classrooms after school and on weekends for college courses. Some of the new classrooms sit on land where just a few years ago crack houses stood—places where drug dealers and users met. Within the next several years, Vaughn's teachers and parents plan to open middle and senior high schools on nearby land.

IMPACT ON STUDENTS. A study conducted by a federally funded school improvement organization, WestEd, for the Los Angeles School Board found that over a five-year period Vaughn students made significant gains in reading, writing, and math. The study noted that Vaughn also improved its rank in all subject areas. For example, Vaughn's students, when compared with students from Los Angeles elementary schools, went from 312 to 234 (out of 469) in reading, 245 to 195 in mathematics, and 326 to 239 in language. The school has also increased its student retention rate. On California's state Academic Performance Index, Vaughn ranks in the top 10 percent, when compared to schools serving a similar group of students.

FOR FURTHER INFORMATION. Contact Yvonne Chan, Principal, Vaughn Next Century Learning Center, 1330 Vaughn Street, San Fernando, Calif. 91340; (818) 896-7461. *www.vaughn.k12.ca.us.*



61a and 61b: Vaughn shares space with a medical clinic and higher education institution. Sharing space allows the school to better serve students and their families.

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Wyandotte High School

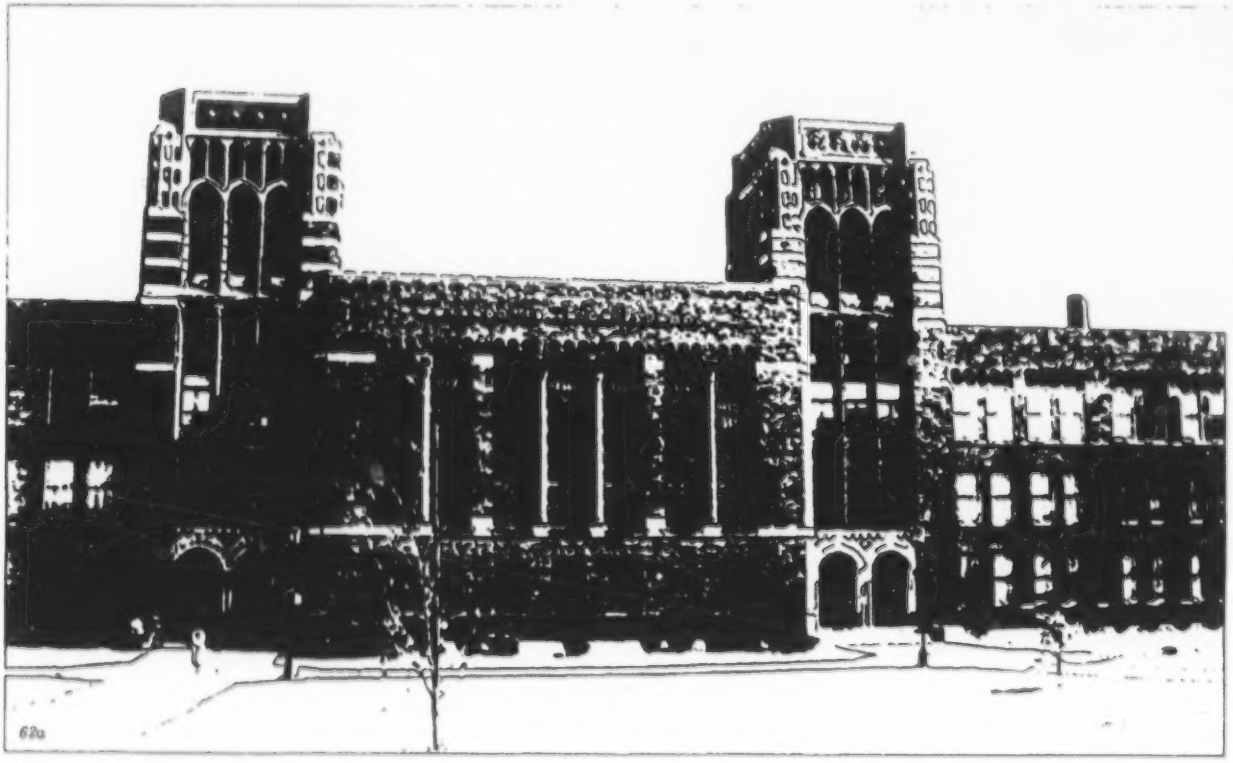
KANSAS CITY, KANSAS

Founded in 1936, Kansas City's Wyandotte High School had declined dramatically by the mid-1990s. Fires were set inside the building, student achievement and graduation rates had declined precipitously. But a new, research-based approach has dramatically improved the school and brought people from around the country to visit it.

KEY EDUCATIONAL FEATURES. In the late 1990s, the faculty developed eight small schools from which the 1,250 students may choose. With one exception, all schools enroll students grades 9 through 12, which faculty thinks is extremely important. Each school is open to and serves a cross section of students from the Kansas City area. The faculty works with dozens of businesses, community agencies, and organizations to develop internships for students so that at least part of their senior year is spent in the community learning about the careers they are considering.

All students must complete a core curriculum regardless of their specialty. The core curriculum includes skills in math through Algebra II, science through chemistry, social studies, computers, life skills, fine arts, and physical education. The teachers, with input from students, created

- *the Business Academy*, which helps students obtain a successful career in business.
- *FAST (Foundations in Applied Skills and Technology)*, which prepares students for work in technology or the trades.
- *Health Careers/Life Sciences*, which helps students develop skills needed for post-secondary education or employment in the fields of health and life sciences.
- *Hospitality*, which teaches students the skills needed in careers such as hotel/motel management, travel and tourism, restaurant management, catering, or childcare.
- *Humanities*, which helps students in a rigorous academic environment to be successful at the university level
- *Performing Arts*, which helps students develop skills in music,



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dance, and drama in areas such as performance and production.

- *Visual Arts Academy,* which instructs students in the visual arts, graphic arts, and industrial technology.
- *Opportunity Center,* which helps students build stronger academic skills and a greater sense of confidence so that they can transfer into one of the seven other programs. It focuses on ninth graders who have been unsuccessful in previous schools.

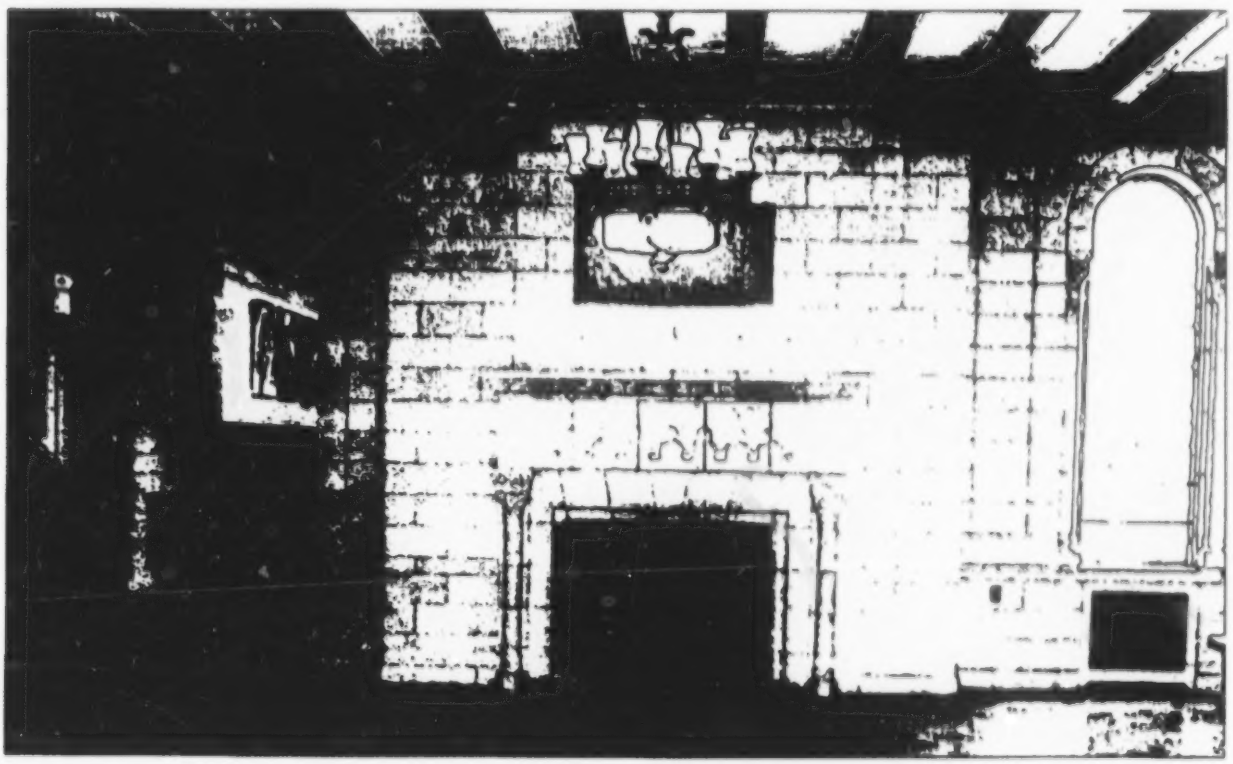
Each Wednesday, students go home or on to internships at noon. Teachers stay in the school for several hours, helping students or doing in-service training.

KEY ARCHITECTURAL FEATURES. Built in 1936, the school contains many distinctive features, including two functioning, wood-burning fireplaces in the main hall. Wyandotte has developed a collaboration with a social service agency located across the street that provides a nursery school/day care center for the children of students

IMPACT ON STUDENTS. Over the last several years, standardized tests and graduation rates have improved. Discipline problems in the school have declined significantly

FOR FURTHER INFORMATION. Contact Principal, Wyandotte High School, 2501 Minnesota Avenue, Kansas City, Kansas 66102; (913) 627-7650, or visit *http://home.sprintmail.com/~pellis001/slc.html.*

62a and 63a: Wyandotte's building, over 60 years old, has been transformed into eight small schools. The results have been better achievement, attendance, and graduation rates and significantly fewer discipline problems.



Resources

NATIONAL CLEARINGHOUSE FOR EDUCATIONAL FACILITIES (NCEF). NCEF is the U.S. Department of Education's information center for people who plan, design, build, operate, and maintain K–12 schools. An affiliated ERIC clearinghouse, it maintains an information hotline and hosts a Web site with thousands of on-line resources on school facilities.
http://www.edfacilities.org

CENTER FOR SCHOOL CHANGE, Hubert H.Humphrey Institute of Public Affairs, University of Minnesota. The Center conducts research and publishes information about creating smaller, personalized learning environments, including information on the Gates Smaller High School Learning Communities Project and the New Twin Cities Charter School Project.
http://www.hhh.umn.edu/centers/school-change/

American Institute of Architects Committee on Architecture for Education (AIA/CAE). The AIA's professional interest group on issues related to pre-kindergarten through university level educational facilities.
http://www.e-architect.com/pia/cae/welcom.asp

Center for Educational Innovation-Public Education Association. The Center has more than twenty years of experience in converting large school buildings into small schools. It publishes information and conducts workshops on converting schools. *http://cei-pea.org*

Charter Friends National Network. The Network provides technical assistance to charter schools across the nation. Many of its resources were developed or co-developed by staff from the Charter Schools Development Center.
http://www.charterfriends.org

Clearinghouse on Rural Education and Small Schools. The ERIC clearinghouse responsible for gathering and disseminating information on small schools, migrant education, American Indian education, outdoor education, and rural education.
http://www.ael.org/eric

Coalition for Community Schools. The Coalition works toward improving education and helping students learn and grow. It offers a range of supports and opportunities for children, youth, families, and communities.
http://www.communityschools.org

Council of Educational Facility Planners, International (CEFPI). The Council is an international professional association whose members—individuals, institutions, and corporations—are actively involved in planning, designing, building and equipping schools and colleges.
http://www.cefpi.org

Programme on Educational Building (PEB). Based in Paris, PEB operates within the Organisation for Economic Co-operation and Development to promote the international exchange of ideas, research, and experience in the field of educational facilities.
http://www.oecd.org/eia/education/peb

Small Schools Project at the Center on Reinventing Public Education. The Small Schools Project provides technical assistance to the new small schools being established in Washington State and elsewhere. Its Web site includes research summaries, articles, case studies, organization names, tools, professional development and facilities information, and job notices.
http://www.smallschoolsproject.

Small Schools Workshop. A group of organizers, educators and researchers based in the College of Education at the University of Illinois at Chicago. The Workshop collaborates with teachers, principals, and parents to create new, small, innovative learning communities in public schools. Its Web site includes an archive of articles, numerous links, a bookshelf, project listings, a calendar, and a directory of small schools.
http://www.smallschoolsworkshop.org

Thomas Jefferson Center for Educational Design, University of Virginia. The Thomas Jefferson Center promotes the design of learning environments that foster the acquisition of knowledge, skills, and wisdom in a climate of caring, cooperation, and mutual respect.
http://www.tjced.org

U.S. Charter Schools. An information clearinghouse and on-line community developed by WestEd in partnership with the U.S. Department of Education and the California State University Institute for Education Reform. It's Web site provides state and school profiles, and information resources and hosts related discussion groups.
http://www.uscharterschools.org

Yale University Bush Center in Child Development and Social Policy. The Center has helped create hundreds of collaborations between schools and social service agencies. It publishes information, conducts training, and holds an annual conference. *http://www.yale.edu/bushcenter*

PHOTO CREDITS

The authors are grateful to the following individuals and organizations for providing the photographs for this report. In all cases, a photo illustration has been created based on the original photograph provided by those listed below.

Virginia Brock, Humboldt High School, photo 63a. *Fanning/Hasey Associates*, photos 10a, 19a-b. *Michael Crowder*, photo 33a. *Brad Knight*, Academy Charter School, photo 34a. *Charles Mabrey*, photos 34a-b. *Minnesota New Country School Students*, photos 48a, 49a-b. *Robert Mitchell*, South Grand Prairie High School, photos 58a-b. *Zeke Montanez*, Vaughn Next Century Learning Center, photos 08a, 61a-b. *Jon Nathan*, Center for School Change, Humphrey Institute, University of Minnesota, photos 7a, 10a, 11a, 25a-c, 29a-b, 30a, 31a-b, 32a, 35a-b, 36a, 37a-b, 38a-b, 39a, 40a, 43b, 48b, 46a, 47a-b, 52a, 53c, 54a, 55a-d, 58a-c, 63a. *Northfield Community Resource Center*, photos 50a, 61a-c. *Mark Real*, Children's Defense Fund of Ohio, photos 6a, 8a, 13a, 14a, 40b, 41a-b, 42a, 43a, 44a, 45a. *Uwe Schneider*, photos 26a, 27a, 28a. *Diana Shaila-Case*, Perspectives Charter School, photos 56a, 57a-b. *Victoria Wilkens*, The Nova Project, photos 55b, 62a-b. *Sarah Woodhead, AIA*, photos 20a-b, 21a-b. Photo montages are based on images used and credited elsewhere in the report.

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